

Population, Permission and Sustainability

A proposal for connected settlements and the right to an independent life

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Abstract

This paper proposes a UK network of complete settlements that begin with capacity for 5,000 people and grow through planned stages of 10,000 and 25,000 towards 50,000. The eventual development footprint is allocated at the beginning, while permanent green zones remain outside settlement expansion. Housing is delivered alongside livelihoods, working infrastructure, accessible services and opportunities for residents to own businesses and shape their communities. Movement between settlements remains free. Local renewable systems and resource recovery provide practical capability, supported by connections to neighbouring places and national institutions.

The argument joins three questions. What does population research establish about the relationship between scale and living conditions? How do land ownership, permission, finance and inaccessible institutions constrain a person's ability to secure a home? What arrangements could expand prosperity while protecting people and ecosystems? Two PLOS ONE archaeological studies receive particular attention, alongside the complete 43-source population research register. The remembered figure of approximately 100,000 influenced the decision to plan for 50,000, but the research does not establish a universal natural ceiling or an optimal city population.

The proposal retains the UK, sterling, markets, private enterprise, the Treasury, pooled public income, borrowing, lending and international trade. It aims for higher real GDP through wider spending power and productive opportunity, assessed alongside household security and ecological outcomes. An anonymous account illustrates one possible experience of exclusion. A proposed independent-living entitlement addresses the gap between an abstract right to dignity and an affordable place to exercise it. International precedents demonstrate components of the model, rather than the complete system. The national map also exposes a real design choice: its whole-population layout does not retain the original ten-mile green gap.

Contents

- 1 The purpose of the proposal
 - 2 Population and the meaning of a limit
 - 3 Archaeology and patterns across time
 - 4 Development and the distribution of security
 - 5 An anonymous account of exclusion
 - 6 Land ownership permission and public power
 - 7 A proposed right to independent living
 - 8 The settlement and its stages of growth
 - 9 The UK population and the map
 - 10 Housing choice and actual building performance
 - 11 Local energy water food and resource cycles
 - 12 Services transport and connected capability
 - 13 Ownership enterprise and lasting affordability
 - 14 Local democracy faith and public benefit
 - 15 The Treasury public finance and higher GDP
 - 16 Land control and the legitimacy of exclusion
 - 17 Research and implementation elsewhere
 - 18 A voluntary transition with complete delivery
 - 19 Choices that remain open
 - 20 A home a stake and a future
- Appendix A Population research register
- Appendix B Proposed independent living protections
- Appendix C Legal routes and implementation notes
- Appendix D Topic coverage
- Reference register

Source codes: P population studies; H housing and marine systems; L land and planning; D housing, rights, services and economics; G international precedents. The reference register supplies primary links and access notes.

1 The purpose of the proposal

We propose that development should be judged by the life it enables people to lead. An additional dwelling is valuable when it gives someone a secure, suitable and affordable home, with the services, relationships and opportunities needed to use it. A larger housing stock, rising land values or a higher national output total cannot, alone, show whether that has happened. Our objective is to expand the practical opportunity to live independently and participate in society while maintaining the natural systems on which that opportunity depends.

The initial concern was population: whether human groups reach a size at which growth stops helping and begins to damage their members. The discussion then moved from a supposed maximum headcount towards the conditions under which a place functions. Space, housing, water, sanitation, transport, work, care, governance and the distribution of resources all matter. People do not become redundant because a settlement passes a particular number. Exclusion from useful activity and a secure life requires its own explanation.

The resulting design begins new communities with 5,000 residents and reserves their full future development area for 50,000. It seeks to relieve places whose services and living conditions are already under strain by creating additional places with genuine opportunities. Residents would have access to homes, productive premises, tools, finance, education, healthcare and local decision-making. The intended transition is voluntary. People should have a reason and a practical means to move, with continuity of care and relationships, rather than an order to leave their present lives behind.

The proposal is a conceptual design informed by research. Its population stages, environmental commitments and proposed rights are choices about how a society should organise opportunity. They are not presented as findings of an experiment that has already implemented the national network. Research findings, historical reconstructions, official statistics, current legal arrangements, ethical arguments and proposed changes are identified separately where the distinction affects the argument.

This paper is also concerned with permission in a wider sense. Access can be controlled by a planning decision, a landowner, a lender, an inaccessible application system, a service contract or an informal expectation of obedience. These are different mechanisms, with different duties and remedies. Their combined effect can nevertheless leave a person unable to use abilities they possess or to reach assistance that nominally exists. A useful system must provide an affordable route through those barriers.

The human purpose extends beyond survival. A home should make room for friendship, family, music, creative work, science, rest and a future. Paid employment is one form of contribution; care, learning, ecological stewardship, art and ordinary relationships also have value. People who cannot work retain the same standing. The UN Declaration on the Right to Development and the adequate-housing framework provide relevant principles of participation, dignity and access to essential resources. They do not, by themselves, establish the domestic planning entitlement proposed here. [D50, D51, L66]

Sustainability here means maintaining ecological function, useful services, financial capacity and a decent life across time. A settlement cannot meet that definition by transferring pollution, unpaid work, maintenance debt or homelessness to someone elsewhere. Its resource connections and national support belong in the assessment, alongside what it can produce locally.

Research approach

The evidence comprises scientific studies of social organisation, archaeology, population reconstruction, crowding, resources and cities; official housing and economic research; legislation and regulatory guidance; and documented settlement and housing programmes abroad. Appendix A retains all 43 entries from the population catalogue. The reference register identifies further construction, marine, legal, service, economic and international sources. Peer-reviewed experiments, observational studies, simulations, reviews, official audits and operator accounts have different evidential roles.

An operator's page can document what a project says it has built, while an outcome evaluation asks what changed for its residents. An archaeological estimate reconstructs a past population under stated assumptions. A policy proposal describes an intended entitlement. None should be silently substituted for another. Access notes are retained where the earlier research relied on an abstract or institutional record rather than a complete article. The scientific material is a scoped evidence synthesis, not a new systematic review or meta-analysis.

2 Population and the meaning of a limit

There is no single population figure that can be transferred between a personal relationship network, a foraging camp, a settlement, a commuting region and an entire society. A town's administrative boundary may exclude much of the area supporting its employment, food or water. Even two studies using the word city can therefore be measuring different systems. Research on urban boundaries demonstrates that the definition can change the apparent relationship between population and economic or infrastructural indicators. [P1-P6, P36]

The proposed 50,000 capacity has a specific history. The remembered research suggested an approximate 100,000-person upper level, and 50,000 was selected deliberately below it, leaving substantial room for growth from 5,000. That is the design rationale. Recovering the papers does not validate the remembered figure as a universal natural roof. The design can still be argued for on grounds of accessibility, oversight, ecological boundaries and opportunity, provided those grounds are stated in their own terms.

The Pre History of Urban Scaling

The 2014 PLOS ONE paper, The Pre-History of Urban Scaling, analyses approximately 1,500 pre-Hispanic Basin of Mexico settlements over two millennia and four broad periods. It connects estimated population and settled area through social interaction, movement costs and infrastructure. The authors find spatial scaling resembling modern urban systems. Their account includes Teotihuacan at approximately 100,000 inhabitants and Tenochtitlan-Tlatelolco at approximately 200,000. The 5,000-person division used in the analysis distinguishes settlement forms; it is not a recommended modern limit. [P16]

This paper remains central because it connects organisation, population and space. Its historical examples include a settlement above 100,000. Average relationships across places do not establish an individual settlement's growth trajectory or ideal size. [P16]

The Casarabe settlement landscape

The 2025 PLOS ONE study, Constraining the population size estimates of the pre-Columbian Casarabe Culture of Amazonian Bolivia, combines construction-labour estimates, resource carrying capacity and an agent-based model. It estimates a peak of 10,000-100,000 across a 5,020-square-kilometre landscape occupied during 400-1400 CE. The discussion considers 50,000-100,000 a reasonable maximum range for that region and suggests the population probably reached no more than 50,000. This is a close match to the remembered wording. It concerns multiple settlements and regional resources, rather than a universal single-city limit. Its occupation chronology draws on radiocarbon dates from only three mounds. [P43]

Its relevance is the connection between networks, labour, land and resources. Modern application is an interpretation; changed technologies, diets, trade and institutions require different assumptions. [P43]

What population research can support

Foraging research finds flexible residential groups connected to wider social networks. One cross-cultural study covered 5,067 people in 32 societies and reported a mean experienced band size of 28.2 adults. That is a sample mean for adults, not a maximum including children or a limit for the wider society. Studies of network hierarchy and flexible residence further caution against treating the camp as an isolated social world. [P3-P6]

The familiar relationship-network estimate commonly rounded to 150 comes from comparative primate research and extrapolation. A later statistical reanalysis found wide uncertainty and sensitivity to method. Neither supplies a rule for the number of people permitted to share a town. Experiments on cultural complexity likewise concern specified tasks and transmission arrangements; a published disagreement over their interpretation illustrates how an outcome definition can alter the conclusion. [P1, P2, P7, P8]

Modern and ancient scaling research identifies potential benefits from larger networks, including specialisation and some economies in infrastructure. It also studies costs that rise with interaction. A natural-experiment setting involving urban division and reunification provides evidence about accessibility and local economic effects, while boundary-sensitive analyses challenge universal scaling formulas. The proposal must therefore preserve useful connections and specialisation rather than assume that a smaller resident count automatically improves every outcome. [P17, P35-P37]

Physical density and experienced crowding are different. Household space, control over noise and privacy, ventilation, exposure and access to quiet can matter independently of a city's total population. WHO's systematic housing review addresses household crowding and health; it does not set a maximum town size. Urban stress research also requires care because residence was not randomly assigned and the measured brain responses are not themselves a diagnosis. [P32-P34]

The captive-mouse experiment often invoked in discussions of population did not test human cities. Its animals could neither migrate nor redesign institutions as people can. It cannot establish human redundancy, an inevitable collapse sequence or a residential cap. The useful planning question is which needs are unmet, which resources or institutions constrain provision, and what choices can change those conditions. [P42]

3 Archaeology and patterns across time

Archaeology expands the range of arrangements available for comparison. It shows settlements growing, contracting, dispersing and changing their institutions and resource systems. It also demonstrates why apparently precise historical population claims need methods, dates and boundaries attached. The past supplies evidence of alternatives and constraints, rather than one natural sequence that every contemporary society must repeat.

At Neolithic Çatalhöyük, research combines skeletal, settlement and biogeochemical evidence over approximately 7100-5950 cal BCE. A reconstructed Middle Period peak of roughly 3,500-8,000 accompanies changes in health, labour, mobility and conflict. Some skeletal indicators have several possible causes. The case supports investigating living conditions over time; it cannot isolate total headcount as the cause of every harm. [P13]

Research on Trypillia mega-settlements examines both food production and contact structure. Stable-isotope evidence supports integrated cultivation and livestock practices. A separate disease model explores how residential clustering and interactions could affect transmission. The model is not proof that an ancient epidemic occurred or that people deliberately applied a particular distancing policy. The two studies show why settlement layout, food systems and social contact need to be examined together. [P14, P15]

European Neolithic studies reconstruct episodes of growth and decline using radiocarbon proxies. One analysis found regional booms and subsequent contractions not explained by its climate comparisons; another identified links between downturns, food procurement and climate reorganisation in Britain and Ireland. Retrospective warning-signal research investigates declining resilience in some reconstructed series. These findings do not establish a single cause for every decline or a headcount at which decline becomes inevitable. [P9-P12]

The Long House Valley model links household decisions, maize production and environmental evidence, including tree rings, within a defined Arizona valley. Maya research compares climate records with political histories. Both contribute mechanisms and dated context, but a model matching settlement patterns is not unique causal proof, and regional histories differ. [P18, P19]

Greater Angkor research combines lidar, excavation, radiocarbon and demographic modelling to estimate roughly 700,000-900,000 people in an extensive settlement region at its thirteenth-century peak. This is not a compact neighbourhood. Studies of Rapa Nui separately challenge familiar assumptions about pre-contact agricultural extent and a severe earlier demographic collapse. Genetic effective population size is distinct from a census count. These cases make a universal 100,000 roof untenable as a summary of the recovered evidence. [P20-P22]

Dating and reconstructing a population

Radiocarbon dating measures the age of suitable organic material. Calibration converts a radiocarbon measurement into a probability distribution over calendar time. It does not directly count residents. Old wood, contamination, reservoir effects and the relationship between a sample and its archaeological context can affect interpretation. BP conventionally refers to years before 1950; cal BP denotes calibrated calendar years. The IntCal20 curve and Bayesian chronological methods provide foundations for handling age estimates and archaeological sequences. [P24, P25]

House counts require estimates of household size, residential use, abandonment and simultaneous occupation. A site containing many structures built over centuries cannot be counted as though all were occupied at once. Bayesian models can combine dated evidence with stratigraphic ordering and occupation phases, but the resulting precision remains conditional on those assumptions. Lidar reveals physical traces, not automatically their date or occupancy.

Summed radiocarbon distributions can help investigate changes in activity or relative population. Preservation, excavation priorities, repeated dating of the same event, calibration-curve structure and statistical choices can produce misleading peaks or troughs. Methods papers and simulation critiques therefore matter as much as attractive demographic graphs. Reproducible analysis should retain raw dates, context, calibration settings, binning, null models and sensitivity tests. [P26-P31]

Stable carbon and nitrogen isotopes can inform diet, cultivation and other environmental questions; they are different from carbon-14 dating. Skeletons can inform health and age structure, subject to selective burial and preservation. Ancient DNA models aspects of ancestry and demographic history. Tree rings and other environmental archives provide independent chronology and context. A strong reconstruction combines these sources rather than asking one technique to answer every question. [P9, P13, P14, P18, P19, P22]

Carrying capacity as a changing relationship

Human carrying capacity depends on consumption, technology, distribution, trade, environmental condition and institutional choices. Food-system modelling shows how assumed diets, agricultural practice and ecological boundaries change estimated support capacity. Cross-national research examines basic needs alongside resource use, while social-ecological frameworks bring governance and resource users into the analysis. These approaches support explicit resource budgets and adaptive institutions; they do not supply a universal settlement population. Historical-complexity research also identifies covariation among social scale, governance, economy and information without proving an inevitable ladder of progress. [P23, P38-P41]

4 Development and the distribution of security

The critique motivating the proposal is that housing construction can increase private asset values while residents experience inadequate services, displacement or an unaffordable life. The mechanism needs to be specified. Additional demand can exceed existing service capacity; demolition can remove low-cost homes; replacement tenures can prevent return; and rising essential costs can restrict mobility and saving. Different developments can also add useful supply and improve access. Outcomes depend on what is provided, what is lost and who can use the result.

The National Audit Office's 2025 work identifies weaknesses in England's system for securing and delivering developer contributions, including negotiating capacity and viability scrutiny. Section 106 agreements and the Community Infrastructure Levy already provide mechanisms for contributions. An amount promised, an amount received and a staffed service operating when residents arrive are different achievements. Our delivery model focuses on that last step while identifying the responsibilities of developers, infrastructure bodies and public service funders. [D37, L10]

The CMA's 2024 Great Britain study identifies planning and land-access barriers and incentives to pace private sales to local market absorption. It did not find land banks themselves to be driving poor outcomes in the way investigated. It also records quality and redress concerns. A separate later regulatory settlement imposed information-sharing restrictions without a finding that competition law had been infringed. These findings support scrutiny and diversified delivery; they do not prove that every developer deliberately creates poverty or that every bank, agent and builder makes record profits. [L24-L26]

Historical affordability statistics describe the scale of the problem without settling every household's options. For financial year ending 2024, ONS reported median home-price to disposable-household-income ratios of 7.9 in England, 5.4 in Wales, 5.3 in Scotland and 4.6 in Northern Ireland. Its 2024 rental figures put average rent at 36.3% of median private-renter gross household income in England, 25.9% in Wales and 25.3% in Northern Ireland. These are dated country-level indicators, with different denominators, rather than current individual budgets. Disability-related expenditure, transport, energy and other essentials also affect what a household can sustain. [D39, D40]

The English landlord survey reports that 17% of direct landlords held five or more properties and represented 49% of the tenancies in its sample frame. It does not cover every rental arrangement. Research also identifies an association between parental wealth and later homeownership even at fixed earnings. A tenant survey records fear of rent increases or eviction discouraging complaints, while also finding many respondents positive about renting. Ownership, insecurity and bargaining power therefore deserve separate measurement rather than a presumption about every provider's motives. [D41-D43]

Displacement and additional supply

Qualitative research on relocated London estate residents records disrupted attachments and relationships, alongside some improved housing. It identifies losses that replacement-unit counts can miss. Research on English supply constraints and moving chains from new housing in Helsinki also identifies potential affordability and access benefits from additional supply. A higher observed price after a development cannot establish its causal effect without considering what would have happened otherwise. The proposal supports additional suitable supply and challenges delivery that transfers uncompensated costs to residents. [D44-D46]

Spreading settlements also has costs. Research on sprawl describes infrastructure and service economies associated with density, alongside congestion and other pressures. Greater distance can increase journeys and network length. New places must provide accessible transport and useful employment rather than become isolated dormitories. There is no implication that poverty, violence or dependence follows automatically from living in a large city. [D47]

Empty affordable homes need a specific explanation. The government's Section 106 delivery roadmap documents completed homes awaiting a registered-provider buyer or other resolution. This differs from proving that every empty dwelling was unlawfully diverted from a council. Planning obligations, grant terms, tenure, adoption, defects and provider capacity determine the actual position. A remedy should bring suitable homes into use while preserving the promised public benefit; a lawful variation should be transparent and account for any lost contribution. [D54, D55]

Migration can add housing demand, but its effect depends on supply, location, incomes and policy. The commissioned 2026 evidence review identifies a generally modest positive relationship with housing costs, with substantial variation and methodological limits. It does not establish immigration as the sole

driver or as irrelevant. Our argument rejects collective blame and asks whether land, housing, infrastructure and finance are being organised to meet actual needs. Claims of deliberate political manipulation or organised foreign influence require their own evidence. [D53]

Housing costs and the ability to have a future

A room rent can, in some circumstances, equal much of a landlord's mortgage payment on a whole property. That comparison needs the actual loan, deposit, interest rate, repayment basis, operating costs and number of rooms. Gross rent is not profit, and mortgage principal builds the owner's equity rather than the tenant's. The underlying policy question survives those accounting distinctions: can the resident obtain secure, decent accommodation and retain resources for food, recovery, family life, learning and saving?

Housing insecurity research links unstable housing circumstances with health-related outcomes, using longitudinal data and its own identification assumptions. UNFPA's 2025 report also identifies economic and housing insecurity among barriers to people's preferred family choices. Neither establishes inevitable population collapse. The proposal supports parenthood where wanted, as well as people living alone or choosing not to have children. A useful housing system enables a future without prescribing one household form. [D48, D52]

5 An anonymous account of exclusion

One contributor describes living with autism, severe pain and physical limitations in accommodation experienced as noisy, cold, damp, dusty and polluted by heavy traffic. Rest becomes difficult. Advice to move offers little relief when a suitable alternative is unaffordable or cannot be sustained. Housing, health, finance and access to assistance become one connected problem rather than separate applications.

The contributor wanted a musical and creative life as a flamenco guitarist. They describe being channelled into unwanted manual construction work, a damaged body and lost opportunities to use their abilities. Their description of the experience as slavery expresses perceived coercion and loss of freedom; this paper makes no legal finding of enslavement. Their construction experience also informs concern about workmanship and unsuitable ground, without establishing that all conventional new homes are unsafe.

Attempts to return to participation included Project 67 and the broader Green Tank body of creative work and research. The contributor reports disability-related barriers to being heard and applying for arts support, including difficulties with a funding portal. The correspondence assessed in the earlier evidence review includes replies and offers of assistance. The problem is therefore more precise than literal nonexistence of any response: whether a usable adjustment enabled the application and fair consideration of the work. Guidance that exists on a website is not the same as an accessible process that succeeds in practice. [D27-D30]

The account describes having to fight for medical investigation, benefits assessment arrangements and support while already vulnerable. It includes concerns about private contractors working through public services and about private diagnostic providers. A later benefits award and an attended neurology consultation are also part of the record. Those outcomes should be acknowledged alongside reported delay, distress and unmet needs. The account does not establish that every provider acted unlawfully or shared an intention to harm.

Difficulty obtaining finance for a second-hand van is described as a further barrier to finding somewhere safe to rest. A van may offer immediate flexibility, but it still needs lawful stopping places, sanitation, security, accessibility and affordable operation. It should be a choice or a practical temporary option, rather than the last available refuge after conventional routes have failed. A lending-discrimination claim requires the actual criteria, reasons, comparative treatment and adjustment requests; the experience of exclusion remains relevant even before such a legal finding.

The contributor also describes isolation and assistance experienced as conditional on religious obedience, without the friendship or practical support sought. Their request is for help that respects belief, disagreement and personal choice. Fears about political hostility, Brexit and suspected overseas influence form part of their experienced insecurity. Those fears are recorded as context, without converting them into independently established explanations of each institutional decision.

The cumulative effect is severe despair and the sense that every affordable route to an independent future has been closed. The relevant design question is what would make a route genuinely usable: a suitable home, an address for correspondence, written communication, practical assistance, continuity of care and opportunities to use creative and intellectual abilities. Recruitment, banking and administration can impose practical address and documentation barriers; there is no universal rule that every job legally requires ownership or occupation of a fixed home.

This is one possible outcome of exclusion, not a representative survey, the only experience of current society or proof of a general conspiracy. It illustrates how individually modest barriers can interact. An inaccessible form, unaffordable move and delayed appointment can collectively prevent a solution even when each organisation points to a nominal service. The contributor's persistent attempts to create, research and participate are part of the account, as much as the distress.

Assistance that can actually be used

The design response is to make accessibility part of ordinary provision. Record communication needs once, with consent; provide written routes and assisted applications; identify an accountable coordinator where needs cross services; and confirm what practical adjustment was delivered. A complaint should examine the actual missed action and resulting harm. Publishing a policy is insufficient if the resident still cannot use it.

The Equality Act framework applies in Great Britain; the accessible-information guidance considered here concerns England. Northern Ireland has its own equality legislation. England's Care Act provides assessment, planning and advocacy duties under specified conditions. Housing-condition, repair and homelessness duties can also matter. These are distinct routes, with eligibility and scope, rather than a single guaranteed package. A national settlement programme should offer an accessible minimum standard while implementing the correct law in each nation. [D2-D10, D12, D13]

The earlier review also identified healthcare complaints, the applicable ombudsman, benefit-provider complaints and independent review routes. A service complaint addresses delay, access or administration; it does not replace a benefits entitlement appeal, a clinical assessment or a planning appeal. For any later rights submission, a chronology should preserve requests, responses, adjustments, outcomes and remaining needs, with consent and proportionate disclosure. [D33-D36]

6 Land ownership permission and public power

Ownership is a real legal interest, but it does not include an unrestricted entitlement to every use of the land. Planning controls development and material changes of use because their effects can extend to neighbours, roads, water, ecosystems and public services. Buying agricultural land therefore does not automatically authorise a permanent dwelling, caravan settlement or year-round residential campsite. A movable home does not automatically remove control of the use of its site. The applicable permission or exemption, works, duration and facts matter. [L4, L6, L7, L55]

This distinction explains the present law; it does not settle whether the law strikes an acceptable balance. A person may own land and a suitable low-cost dwelling, be willing to manage water, power and food, and still lack a lawful place to live. When conventional housing is inaccessible, that can make the distinction between ownership and permission feel like an absence of ownership in practice. The proposed reform addresses the entitlement itself, rather than relying solely on an appeal after refusal.

An example raised in the discussion concerned a young couple reportedly required to leave a static caravan on parental land because residential permission was absent, without a suitable alternative being offered. The actual notice, housing duties and circumstances have not been established. The example frames the ethical question: when an authority intervenes in an existing home, who takes responsibility for the foreseeable consequences for the occupants?

Councils receive their powers from legislation and must exercise them within that framework. They are not legally unlimited authorities. A development plan, statutory decision test, reasons, appeal rights, equality duties and judicial control can constrain their decisions. An adverse result can be lawful, mistaken or unlawful; the specific error and remedy matter. Reported criminal conduct should be investigated through evidence of the act, responsible body and applicable offence, rather than assumed from the existence of planning control.

The principal frameworks are the Town and Country Planning Act 1990 in England and the existing Welsh framework, the Town and Country Planning (Scotland) Act 1997, and the Planning Act (Northern Ireland) 2011. Wales has enacted a 2026 consolidation whose main new framework is anticipated to commence in October 2027. Commencement and amendments must be checked for the provision used. English national policy does not govern the other three nations. [L4, L6, L7, L32-L34]

Table 1 Planning powers and review across the four nations

Nation	Permission and enforcement framework	Main merits review route
England	1990 Act; development and permission under sections 55 and 57; distinct enforcement powers.	Planning Inspectorate appeals for qualifying decisions and notices.
Wales	Existing 1990 Act framework with Welsh amendments; transition to the 2026 consolidation.	Planning and Environment Decisions Wales for qualifying appeals.
Scotland	1997 Act; sections 26 and 28 concern development and permission; separate enforcement provisions.	Local review body for specified delegated decisions, or Ministers through DPEA.

Nation	Permission and enforcement framework	Main merits review route
Northern Ireland	2011 Act; sections 23 and 24 concern development and permission; separate enforcement provisions.	Planning Appeals Commission for qualifying decisions; specified DfI functions remain.

What can be challenged and what a win means

A refusal appeal can reconsider planning merits and grant permission or change conditions. An enforcement appeal can address whether a breach occurred, whether the use is lawful, whether steps are excessive or whether more time is needed, within the available statutory grounds. A lawfulness certificate concerns legal and factual status. Court review normally addresses legality and can quash a defective decision, rather than automatically grant the desired permission. An ombudsman can address qualifying maladministration and injustice, rather than replace an available merits appeal. [L45-L57, L64, L65]

The earlier research identified a caravan permission upheld in a 2004 House of Lords judgment, where health, lack of an alternative pitch and the planning balance mattered. It also identified a 2017 Supreme Court judgment upholding the quashing of a major permission because the council had not adequately explained important departures from its assessment. These demonstrate that councils can be successfully challenged. A separate European human-rights judgment concerning unauthorised residential land use found no violation on its facts. The combined lesson is that evidence, legal duties and proportionality matter; none supplies a universal exemption. Case citations are [2004] UKHL 33, [2017] UKSC 79 and application 27238/95. [L58, L60, L61]

The practical sequence is to obtain the complete decision or notice, identify the jurisdiction and legal power, protect the correct deadline, collect the plan and decision evidence, and answer each reason with a relevant ground and requested remedy. Document health, disability, family circumstances, alternatives and the effects of displacement where material. Distinguish the appeal's legal test from a general objection to the system. A complaint or continuing correspondence should never be assumed to stop an appeal or court deadline. [L46-L54]

Environmental-information rights can help obtain planning records, assessments and infrastructure evidence. Scotland has its own regime. Commercial confidentiality is subject to legal conditions rather than a blanket refusal, although these rights do not compel every private landowner to disclose all contracts. Wider change can also be pursued through plan consultations, allocations, examinations, elected representatives and strategic settlement programmes. Wales's One Planet Development guidance supplies an existing low-impact countryside route for qualifying projects, with a management plan and continuing commitments; it is not permission for a 50,000-person town. [L30, L31, L62, L63]

Life home and dignity

Convention rights concerning life, home, private and family life, and property can constrain public action. They have different tests and do not constitute automatic authority to build on any chosen parcel. The right to adequate housing under the International Covenant on Economic, Social and Cultural Rights adds a substantive framework of security, affordability, habitability, services, accessibility, location and cultural adequacy. General Comment 7 addresses homelessness caused by eviction and appropriate steps towards alternatives for people unable to provide for themselves. [L66, L67, L75]

The 2025 UN review of the UK identifies housing concerns and limits associated with incomplete domestic enforceability. Current homelessness duties also contain eligibility and other statutory tests. In England, guidance recognises that someone with a caravan, vehicle or vessel adapted for habitation can still be homeless if there is nowhere they are entitled or permitted to place it and reside. Owning a shelter is therefore not always enough. [L68-L70]

Our proposed standard is stronger: planned enforcement against an only home should not take effect by making its occupants homeless. A genuinely available, affordable, safe and accessible alternative should precede displacement, while necessary emergency protection remains possible. This is proposed domestic reform, not a description of an existing blanket prohibition.

7 A proposed right to independent living

The proposed Independent Living and Limits on Local Authority Powers framework changes the starting point. A person using land they own or occupy with valid owner consent should have a protected route to provide a safe home and essential systems. The right should cover suitable modular, mobile, relocatable and conventional dwellings. An accessible notification should establish useful public records without becoming a disguised discretionary permission process.

Councils would assist residents to resolve evidenced problems. Technical requirements would be public, proportionate and based on performance, allowing equivalent technologies and construction choices. Locally generated energy, rainwater and lawful sanitation should not be rejected merely because a commercial supplier operates nearby. Independence from a supplier would not imply exemption from taxation, pollution law, criminal law or the rights of neighbours.

Compulsory permanent interference with the protected home would require independent court scrutiny, credible evidence of serious harm or substantial risk, and consideration of less intrusive remedies. Repair, drainage improvements or a narrower restriction should be preferred where they effectively resolve the problem. An unconventional appearance, low price, lack of an earlier discretionary permission or a developer's prospect of greater profit should not, alone, justify removal.

The framework would protect existing occupants during transition and provide declarations, injunctions, restoration where practicable and compensation for unlawful action. Accessible procedure and assistance with costs would make those remedies usable. Emergency evacuation would remain available to prevent imminent serious injury or loss of life, with safe temporary accommodation and prompt review of continued exclusion. Appendix B preserves all sixteen elements of the earlier policy draft.

This proposed right must be reconciled with the settlement's permanent green zones. A rule protecting a person's home cannot simultaneously mean that every household may expand housing into land already reserved for wildlife. The national framework needs transparent ecological exclusions and fair site options. Protection should be tied to demonstrable interests and an effective alternative route to a home, rather than environmental language becoming an unexplained general veto.

What the UN can and cannot provide

UN treaty obligations can bind the UK internationally, but treaties do not automatically change domestic law or confer an individual planning permission. The UN Charter is not a parallel local planning authority. The Council of Europe's European Charter of Local Self-Government is a separate instrument,

concerning local autonomy and resources within its scope; it is not a UN or EU permission system. Domestic implementation and remedies remain essential. [D75-D82]

The disability convention is especially relevant to choice of residence, support and inclusion in community life, and to cultural participation. The UK participates in its Optional Protocol. An individual communication to the CRPD Committee requires an arguable rights complaint and admissibility, including the applicable rule on exhausting available domestic remedies and its exceptions. It is not the same route as the adequate-housing covenant, and ratification of one instrument does not make every UN complaints mechanism available. [D15-D18, D23, D30]

Special Procedures offer a different route: mandate-holders may consider credible information and communicate with governments about alleged violations. They do not require exhaustion in the same way as a treaty-body complaint, do not act as a planning appeal court and cannot guarantee investigation, compensation or an enforceable order. Possible outcomes include questions to government, public findings, recommendations and pressure for an effective remedy. A treaty body's views are also distinct from a domestic court judgment. [D19, D25, D26]

A later submission could combine the anonymous experience with the structural policy issues while keeping the case-specific facts, legal claims and requested remedies distinct. It would need informed consent, a clear chronology, the rights relied on, steps taken, responses received, remaining barriers and a precise request. Suitable housing, accessible communication, effective assessment and non-repetition are concrete outcomes to consider. This paper supplies an argument and research base; it is not itself a filed complaint.

8 The settlement and its stages of growth

Each settlement begins with a working 5,000-person community. Before occupation, its masterplan allocates the eventual footprint for 50,000, including homes, livelihoods, civic facilities, services, internal green space, transport and utility corridors. Expansion takes place within that envelope. Permanent green zones lie outside it and remain excluded from settlement expansion. The purpose is to stop each phase negotiating away land that the whole design intended to preserve.

The planned stages are capacities for people, not fixed numbers of identical houses. Household composition, accessibility, care and changing family needs determine the dwelling mix. Settlements do not all need to occupy the same stage at once. A 5,000-person phase must function as a place in its own right, with funded access to specialist services across the network, rather than wait decades for a later phase to make life viable.

Table 2 Growth inside the reserved development footprint

Planned capacity	What the stage must provide	What is reserved or expanded
5,000	Suitable homes, enterprise space, everyday services, working utilities and connections.	The full future envelope, green-zone boundaries and protected service corridors.
10,000	Additional households supported by actual utility and staffed-service capacity.	Treatment modules, education, care, transport and productive premises as required.

Planned capacity	What the stage must provide	What is reserved or expanded
25,000	A wider range of local work, learning, markets and care, with dependable specialist links.	Further capacity inside the original allocation, with funded maintenance and reserves.
50,000	The planned final development capacity and complete service provision.	Continuing renewal and adaptation; further settlements provide additional opportunities.

Natural growth is an explicit purpose. The initial population can grow, families can form, wildlife can recover, and knowledge, technology and culture can develop. The physical plan should guide provision without freezing a community's life. A planning capacity of 50,000 should trigger provision of further options across the network; it should not become a birth restriction, expulsion rule or reason to split families. A literal headcount ceiling would need provisions for ordinary demographic change that the present concept has not defined.

Two programme duties should be expressed in the eventual legal framework: verified infrastructure and service capacity for every occupied household, and open movement between settlements. Residents remain free to travel, without settlement border controls or local citizenship walls. Ecological management of a sensitive habitat, lawful access arrangements and the privacy of a home remain compatible with that freedom. The words village, town or city need not carry a hierarchy of residents' worth or dictate an identical culture.

Protected green zones and stewardship

The original preference is a minimum ten-mile green separation, understood in the earlier map as the gap between final settlement edges. Green zones can support wildlife corridors, recreation, water management and compatible food production. They are not simply vacant areas awaiting a later change of mind. Secure landholding, governance, planning protection and appropriate conservation arrangements should support their purpose. A masterplan colour or a time-limited biodiversity obligation alone is insufficient to express permanent protection. [L16, L21]

Every household participates in environmental responsibility through an accessible stewardship arrangement. Roles can include monitoring, records, planting, education, administration or an appropriate funded contribution. Professional staff undertake work needing specialist skills. Disability must not turn conservation into a compulsory labour test for retaining a home. The ecological baseline, management budget, public reporting and independent review belong in the operating model.

Permanent protection should preserve ecological function as environments change. Habitat restoration, water management and necessary maintenance may require adaptation without opening the area to housing expansion. Any transport or utility corridors must be allocated from the beginning, with their impacts acknowledged. Calling land green does not make a road, energy installation or sewage discharge ecologically harmless.

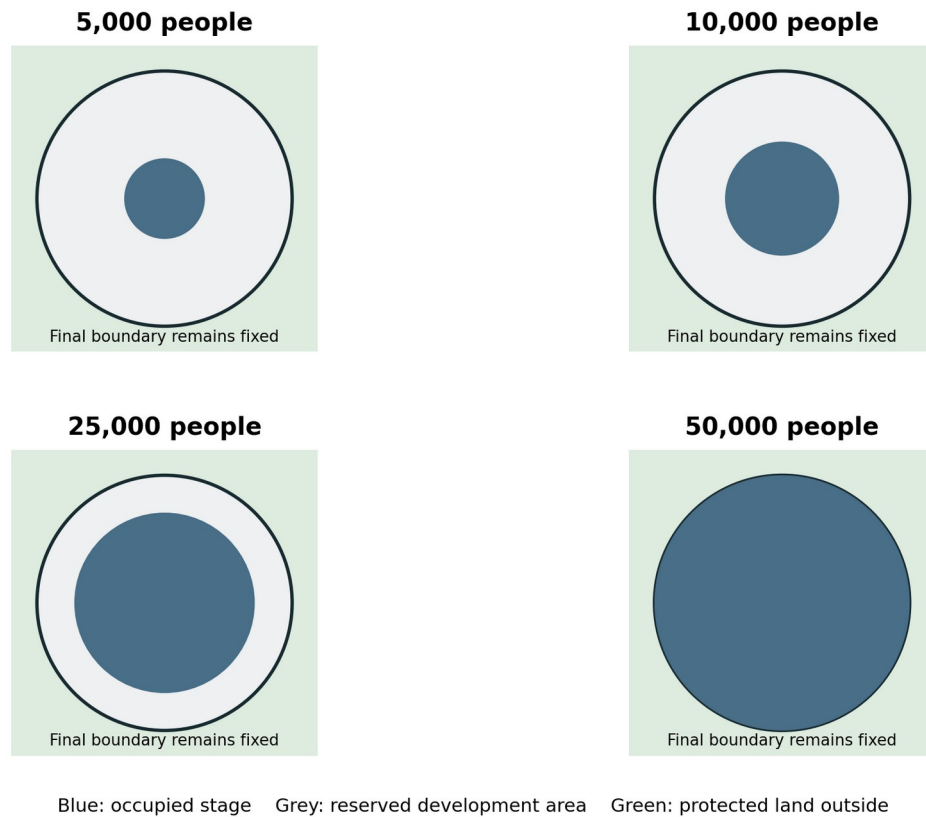


Figure 1 Growth within a fixed final envelope. Circle areas illustrate the earlier constant-density model; this is a growth schematic, not a site plan. Green land remains outside expansion.

9 The UK population and the map

The map uses the official mid-2025 UK estimate of 69,483,900, released on 1 October 2026. It covers the whole UK population in that estimate, rather than only England or a selected group of residents. It is not a real-time count. At 50,000 places per settlement, the arithmetic minimum is 1,390 settlements, providing 69,500,000 places and only 16,100 spare. Future population change and useful operating headroom require additional capacity beyond that minimum. [L74]

The earlier geometric model assumed circular final envelopes of 25 square kilometres at a gross density of 2,000 residents per square kilometre. Each circle has a diameter of approximately 5.64 kilometres. These are model assumptions, not recommendations produced by the archaeological papers. The 25 square kilometres includes the town's development envelope; it is not a demonstrated total land requirement for its food, water, energy and ecological support.

Table 3 Two different mapping scenarios

Scenario	Model result	What the result establishes
Ten-mile gap between final edges	540 placed settlements; 27 million capacity.	This tested lattice does not house everyone. Its count is not a proven packing optimum.

Scenario	Model result	What the result establishes
Whole baseline population	1,390 settlements; 69,483,900 residents; approximately 4.82-mile edge gaps.	Everyone is allocated in this geometric scenario by changing the original gap rule.
Capacity and land arithmetic	34,750 km ² in final town envelopes; about 14.3% of the mapped UK outline.	The remaining land still has agricultural, ecological and other uses; it is not all available.

A separate geometric bound in the map also excludes fitting all 1,390 circles at ten-mile edge gaps under those assumptions. Enlarging each town circle by half the required gap creates non-overlapping discs. Comparing their combined area with a buffered UK outline gives an optimistic bound of roughly 830 towns, already below the number required. This is a geometrical upper bound for the stated model, not an inventory of suitable sites and not a claim that 830 towns could actually be delivered.

The national geography therefore retains an open choice: revise separation, alter the footprint and urban form, limit the extent of redistribution, or use a combination. The paper does not conceal that choice by describing the whole-population map as satisfying every original rule. Greater building density also does not automatically solve access, food-system, transport or ecological requirements.

The mapped locations are examples, not proposed plots. They have not been screened for ownership, productive agricultural soils, protected habitats, flood risk, slopes, water or transport. The model does not preserve population shares between the four nations, nor demonstrate acceptable relocation distances. Its counterfactual end state does not quantify demolition, construction emissions, restoration, finance or implementation time.

The initial request to distinguish populated land from unpopulated land raised farms, large estates, extensive private gardens and golf courses. These uses can reasonably be scrutinised for public benefit and access. Low population is not evidence of waste: farmland, woodland, wetlands, water catchments and open habitats perform functions on which towns depend. A national land strategy should compare those functions and rights transparently rather than treat every green pixel as a building site.

The national scenarios



Figure 2 The earlier geometric scenarios. The left layout retains ten-mile edge gaps; the right allocates the full population by reducing the gap to approximately 4.82 miles. Red marks town envelopes and green shows land outside them, whose suitability and uses have not been screened. Source: project model of 13 October 2026; ONS population baseline [L74].

10 Housing choice and actual building performance

Housing should be warm, quiet, dry, accessible, repairable and affordable to occupy. Residents should have meaningful choice over size, form, investment and suitable construction methods. A lower-cost home can be a considered preference rather than evidence of reduced dignity. Conventional construction should meet the same scrutiny of actual performance as an unusual design.

Insulated sandwich panels were proposed for speed, simpler assembly, insulation and possible savings compared with more conventional systems. Their result depends on the complete wall or roof, core material, fire performance, junctions, water management, corrosion protection and maintenance. A panel and a roof tile serve different functions within assemblies. The proposal seeks better whole-building performance; it does not establish that every sandwich-panel system is cheaper, safer or longer-lived in every location.

Ground conditions and foundations deserve independent attention. The contributor's building experience reports poor workmanship and unsuitable soil on some projects. Official structural and site-preparation guidance and modular-construction research support examining loads, movement, contamination, drainage, interfaces and inspection. A planning consent is not a warranty of workmanship; an alternative material is not a substitute for an engineered support design. [L71-L73]

Concrete foundations need not be compulsory for every home. Ground screws, pads, removable beams and other support arrangements can suit appropriate buildings and sites. Wall material, foundation and mobility are separate decisions: a natural-material home may still use concrete, while a lightweight modular dwelling may use removable supports. Accessibility, flood conditions, wind uplift, service connections and the expected life of the structure influence the choice. WikiHouse and Wikkellhouse provide documented examples of alternative support arrangements. [H1, H2]

Table 4 Housing forms retained in the design

Form	Documented reference or research	Relevance and boundary
Open timber systems	WikiHouse technical guides. [H1]	Local fabrication, assembly, repair and reuse; site-specific engineering remains necessary.
Straw and timber	LILAC homes; laboratory panel research. [H3, H4]	Built cooperative housing and tested thermal assemblies; moisture and fire details matter.
Hemp and lime	Experimental building tests. [H5]	Potential insulating infill with a load-bearing frame; whole-building moisture and thermal design.
Earth and cob	CobBauge demonstrator and monitoring. [H6]	Local materials and drying behaviour; shrinkage and construction time must be allowed for.
Earthships	Brighton community-centre demonstration. [H7]	Integrated energy, water and treatment ideas; not a universal UK residential performance result.
Modular and demountable homes	Wikkellhouse and other prefabricated forms. [H2]	Phased construction, relocation and recoverable components.

Form	Documented reference or research	Relevance and boundary
Land boats and mobile dwellings	Trailer or chassis-based forms; Land Ark example. [H8]	Relocatable homes with secure supports and services; UK residential status is a separate question.
Tree ships and elevated homes	Treehotel built visitor accommodation. [H9]	A working design family, including independent supports; access, roots and evacuation need attention.
Houseboats and amphibious homes	Thames amphibious house and Maasbommel. [H10, H11]	Site-specific water and flood adaptations, flexible services and safe access.
Connected floating homes	Schoonschip occupied neighbourhood. [H12, G13]	Shared systems on sheltered urban water; not an occupied autonomous open-ocean city.

The alternative-material studies supply useful measured details. The investigated prefabricated plant-fibre panel achieved an approximate U-value of 0.178 W/m²K; it is a result for that assembly. Hemp-lime research compared experimental building tests with laboratory and transient modelling. CobBauge monitoring reported substantial drying shrinkage in the studied walls, illustrating why movement allowances belong in the design. These are reasons to learn from tested systems and their limitations, rather than choose a material by reputation alone. [H4-H6]

Cost comparisons should include the finished home, site works, services, finance, energy, repairs, insurance where relevant, replacement components and eventual relocation or disposal. An inexpensive shell can leave costly gaps. The same scrutiny applies to a developer-built conventional house. Local manufacture and standard service interfaces could widen skills and repair capability while allowing varied homes; this is an intended production model rather than a measured national saving.

11 Local energy water food and resource cycles

The defining service obligation is capacity for every occupied household. It means usable provision at the time of occupation, plus maintenance, staffing where required, contingency and renewal. It does not require every component for 50,000 to operate on day one. The final sites and corridors are reserved early, while modules and funded connections expand ahead of the demand they must serve.

Energy and useful independence

Every suitable roof is intended to contribute solar generation, subject to orientation, shade, structural and other site conditions. The system also needs storage, demand management, controls, dependable heat, backup and maintenance. Rooftop solar alone does not demonstrate winter adequacy or continued supply during a blackout. A microgrid needs the equipment and operating arrangements to separate and continue serving its critical loads safely. Connections between settlements and the wider grid provide mutual support. [D57]

Local control can mean community ownership, a cooperative operator or an accountable service arrangement. It should be possible to avoid compulsory dependence on one commercial supplier where an equivalent lawful system works. Generation, distribution and supply nevertheless have different legal

requirements. The named operator, replacement responsibilities, tariffs and arrangements if it fails must be clear. The energy system should provide affordable service to people without the capital to buy their own equipment. [L20]

Rainwater and safe sanitation

Rainwater capture was proposed for flushing, bathing and drinking, with locally made or maintainable filtration where suitable. Those uses require different treatment and distribution arrangements. A filter's existence does not establish removal of pathogens or chemical contaminants. Roof yield, storage, dry periods, demand, verification, maintenance and protection against cross-connections belong in the design. Publicly understandable quality records would make the service accountable. English private-water-supply rules illustrate the regulatory scope for domestic uses; the other nations require their corresponding arrangements. [H7, L18, D60]

Local sewage treatment should recover useful resources where appropriate and prevent harmful discharges. Treatment performance, sludge handling, storm flows, nutrients, energy, odour and maintenance must be considered together. A town cannot assume that an exemption designed for a small household system applies to its much larger flow. Discharge and environmental responsibilities need a named, funded operator and continuity if that operator fails. Recycling, repair and resource-recovery centres should complement sewage treatment, with specialist hazardous materials handled through appropriate wider systems. [L19]

Aquaponics perennial planting and local markets

Aquaponics links fish and plant production through managed water and nutrient flows. Perennial crops, orchards and other suitable planting can contribute to a longer-lived local food landscape. These systems can create resident-owned farms and businesses, training and routes to sell into markets. They complement a broader food supply: a set of greenhouses or fish tanks does not, by itself, demonstrate a balanced diet for 50,000 people throughout the year.

Life-cycle research on a high-tech decoupled aquaponic greenhouse shows why energy, equipment, feed, water and operating assumptions must be assessed together. Environmental benefit is a question about the actual system and alternatives. Local production can reduce some transport but does not automatically have a lower footprint. Fish welfare, biosecurity, food safety and treatment are part of competent operation. Organic labelling also requires the applicable certification rules; aquaponic produce should not simply be called organic because it is local. [D59, D63]

The intended commercial arrangement gives local growers dependable access to premises, processing, storage and buyers. Local purchasing commitments can be designed around quality, fair prices, diversity and applicable procurement law. They should not create a closed cartel, exclude a better accessible option or force residents to buy only one provider's products. A useful market lets new producers enter and residents choose, while public purchasing can help viable businesses establish themselves. [D64]

Giving resources back to the sea

The proposal also asks why organic material is wasted while marine life needs food. Uncontrolled disposal of domestic food scraps or sewage can produce excess nutrients, oxygen depletion and harm. A concentrated waste stream is not automatically a balanced food source for an ecosystem. Prevention, safe

redistribution, validated by-product uses, composting and authorised digestion are distinct resource pathways. [H16, H17, H20]

Integrated multi-trophic aquaculture is a relevant research direction: fed organisms can be combined with species using some particles or dissolved nutrients. Shellfish and seaweed cultivation can provide services under suitable conditions, with site selection and monitoring essential. Stocking, flows, oxygen, sanitation, habitat effects and nutrient budgets must be managed. Restoration and litter removal should accompany marine habitation, with changes compared against a baseline. This is controlled cultivation and stewardship, rather than permission to dispose of a settlement's waste in the sea. [H18, H19]

Floating networks and open water

Connected ships and floating modules extend the housing concept. The image of carbon atoms connected within a material inspires a distributed arrangement of dwellings, service platforms and links. Engineering research examines connector forces and module motion through wave-tank and numerical studies. It supports investigation, not certification of a residential fleet. Mooring, waves, fatigue, corrosion, damage isolation, evacuation, access and service continuity become central questions. [H13, H14]

Sheltered floating neighbourhoods provide a closer practical starting reference than an open-ocean city. Announced floating-city designs are proposals unless occupation and operation are demonstrated. Marine settlements would need their own legal, financial, ecological and engineering framework; they are an optional extension of the national concept, rather than an uncoded assumption that resolves the land-spacing question. [H12, H15]

12 Services transport and connected capability

The network distributes everyday capability while sharing facilities that require a larger catchment, specialist staff or expensive equipment. Schools, primary care, community care, accessible civic services, police, ambulance access, repair and recycling belong close to residents. Hospitals, specialist medicine, colleges, universities, advanced laboratories and national defence can operate through connected regional and national arrangements. The relevant test is dependable access for every household, not whether every service has an independent building in every initial settlement. [D56]

Technology can help match facilities to local needs through diagnostics, communications, shared records, remote teaching and distributed research. It does not abolish staffing, equipment, travel or training requirements. A small settlement cannot assume it has the equivalent of a complete university hospital because it has a communications room. The national network must identify where specialist capacity resides, how people reach it and who funds its availability.

Health care and support across a lifetime

Health provision includes primary care, pain and other continuing care, mental-health support, prevention, emergency access and referral pathways. An appointment that cannot be reached or a communication method that cannot be used is not adequate access for the resident concerned. Continuity during a move must be designed into the transition rather than left for an unwell person to negotiate unaided.

Care homes form part of the settlement alongside independent living, home care, supported housing and respite. Residents should have choices about where and with whom they live, with appropriate support.

Those needing residential care remain members of the community, with relationships, privacy, culture and a voice. Person-centred care and consumer rights provide relevant existing standards, within their jurisdictional scope. Regulation is divided among the relevant bodies in England, Wales, Scotland and Northern Ireland; an English regulatory rule is not a UK-wide licence. [D65, D66]

Care requires staff, fair conditions, training, safeguarding and a reliable operating budget. Local proximity may help relationships and travel, but buildings and proximity alone do not provide care. Allocation should also avoid concentrating people with high needs in a place whose revenue cannot support them. National pooling and needs-based transfers help keep the right to support independent of local property wealth.

Education culture science and livelihoods

Schools need accessible buildings, staff, appropriate places and routes for changing age profiles. Colleges and universities can combine local learning spaces, shared specialist facilities, placements and remote access. Vocational skills should include construction, repairs, energy, treatment systems, food production, care and business administration. Lifelong learning enables residents to change direction rather than remain confined to work assigned by circumstance.

Creative opportunity belongs in the same plan. Studios, rehearsal and performance space, workshops, libraries, digital production and accessible funding applications make music, research and art possible beyond people with inherited resources. The right to cultural participation is relevant alongside independent living. The aim is to enable an individual to pursue a chosen field where possible, while maintaining ordinary freedom to rest, care for others or participate without turning every activity into a saleable product. [D30]

Business sites should be ready for use at each stage. Residents need a realistic route to premises, tools, skills, credit, customers, broadband and advice. Grants, start-up loans, shared equipment and fair public purchasing can help. Allocation should be transparent, with support for disabled applicants and people without a conventional employment history. A new settlement offers little opportunity if all viable premises and supplier contracts are captured before residents arrive.

Transport and open movement

Consistent green transport designs and interchange arrangements can make the network easier to use. Local daily trips should be short and accessible, with dependable links between settlements and wider centres. Walking, wheeling, cycling, accessible public transport, freight and emergency vehicles have different requirements. Uniformity should improve compatibility and repair, while routes and vehicles remain adaptable to terrain and passenger needs.

Local food, treatment, repair and production aim to reduce unnecessary transport. Some supply chains and specialist journeys remain necessary. A ten-mile green gap creates distance that transport must bridge, and spreading facilities too thinly can increase travel. The model therefore needs connected service catchments, coordinated timetables and affordable fares, alongside digital access. No border between settlements is created by the service network.

Communications observation and resilience

Distributed servers, communications links, transponders, radar, weather observation and other sensors were proposed across the national pattern. Potential benefits include shorter local links, shared observations, multiple routes and smaller nodes serving defined areas. Scientific observation requires suitable siting, calibration and quality control; a regular grid is not automatically a sound weather or radar network. Terrain, line of sight, range, spectrum and purpose affect coverage. [D61]

The design seeks fewer single points of failure and the ability to recover from faults or attack. NIST's cyber-resilience framework supports designing for anticipation, endurance, recovery and adaptation. Identical equipment can also create common vulnerabilities. Diversity where useful, segmentation, secure maintenance, local fallback and tested recovery matter alongside physical distribution. No layout can promise an absence of blind spots or an invulnerable network. [D58]

Sensors should serve a defined public purpose with privacy, security, limited retention and accountable access. Environmental monitoring and transport safety do not require indiscriminate surveillance of residents. Public oversight should cover operators, data use, complaints and the consequences of inaccurate observations. Technical capability should not create a new unaccountable authority.

Civilian safety and national defence

Police and ambulance services should be visible, available and able to draw on nearby capability. Councils should have a staffed, accessible presence in plain sight. National defence remains a shared national responsibility. Military assistance to civil authorities has a distinct framework; it is not a standing replacement for civilian police or ordinary democratic administration. [D62]

The aspiration that service personnel can live close to family and return home more often is a quality-of-life objective. Duties, training and deployments prevent a promise that every person will return daily. The practical design should improve local housing and family support without assuming that geographically distributed small units can replace every specialised capability.

13 Ownership enterprise and lasting affordability

The proposal seeks more owners and creators, alongside employees and customers. Secure access to a home, affordable essential services and usable productive assets can make enterprise possible for someone whose income has previously been absorbed by survival. That requires an entry route for people without savings, established credit or family wealth, and a housing route for those unable to sustain a loan.

Government-backed zero-deposit mortgages are a proposed instrument. They are not an existing universal entitlement; the mortgage-guarantee scheme examined in the research supports eligible lending with deposits as low as 5%. A guarantee shifts risk and may help entry, but does not remove repayments, income constraints or construction costs. Public underwriting needs affordability protections, transparent contingent liabilities and a way to prevent additional credit merely bidding up land prices. [L39]

Grants, community land trusts, shared equity, cooperatives, secure social tenures and other supported arrangements can address different needs. Ownership should not be the only route to dignity. Residents need a usable choice between suitable tenures, with transparent costs, security and maintenance

responsibilities. A person unable to work should not lose access to a home because a business plan or mortgage application cannot be made viable.

The proposed one home principle

Limiting the accumulation of homes as investment portfolios is intended to widen access and reduce dependence on a small number of owners. Related ideas include restricting speculative resale or rental gains and preserving affordability through gifts, transfers to people needing homes, or stewardship arrangements. These are proposed distribution rules. Their effects depend on definitions and transition, including beneficial ownership through companies and trusts, household formation and separation, inheritance, temporary moves and vacant homes.

Public, cooperative and nonprofit providers may legitimately hold many homes for many households. A rule aimed at private accumulation should distinguish those functions and protect existing tenants. Selling a rented property changes ownership; it does not create another dwelling or automatically give the tenant purchase finance. Residents need a route to remain securely or acquire a stake without an eviction wave. Shared-equity and cooperative precedents provide options for preserving affordability across successive occupants. [L36, G16-G19]

Control of land can also become control of jobs, housing and community participation. The proposed landholder or cooperative needs democratic checks, independent disputes, clear charges and limits on exclusion. A community label alone does not prevent concentration of power. Residents should not have to surrender political, religious or personal independence to keep their home or livelihood.

14 Local democracy faith and public benefit

Local voting and control should bring decisions closer to those affected. This requires understandable budgets, published contracts and interests, reasons for decisions, accessible meetings and written routes into assistance. Councillors and staff should have dependable public hours and responsibilities that can be identified. Openness does not require the disclosure of every private care record or unrestricted interruption of all working time.

The purpose of reducing bureaucracy is to remove repeated explanations, inaccessible forms, unclear responsibility and avoidable delay. Coordinated records with consent, clear service standards and effective review can reduce that burden. Necessary safeguards, competent staff and public audit remain part of useful administration. Claims of savings should be measured rather than assumed simply because an office is smaller.

Existing transparency requirements and public-meeting rules provide part of the foundation, with jurisdictional limits and lawful confidentiality. Local budgets should also explain shared service payments, maintenance reserves, debt and national transfers. A public ledger should distinguish money committed, paid and spent, physical works completed, and services actually available. [D88, D89]

The proposed common political reference point is a good life with dignity, safety, freedom, truthful information and real opportunity. It allows disagreement and communication across views. It is not a compulsory ideology at the midpoint between political parties. Residents, minorities, disabled people and newcomers require rights that a local majority cannot vote away.

Shared community and worship space

The plan seeks to avoid duplicating large, underused facilities while people lack practical help or meeting space. Shared rooms and timetables can accommodate worship, secular gatherings, care, education and community events where needs are compatible. Design should consider storage, privacy, acoustics, accessibility and fair booking rather than assume every activity can use the same room simultaneously.

Peaceful conduct and respect for others should apply equally. Support should not depend on conversion, worship, political obedience or joining a favoured group. An authority should not decide who has sincere faith or expel a resident for peacefully declining to share a particular ritual space. Freedom of religion and belief also protects nonbelief. New shared facilities can be planned on fair terms while existing property, trust purposes and legal rights receive proper treatment. [D67, D68]

Underused religious buildings can be considered for voluntary or otherwise lawful reuse, including shelter and community services where suitable. A building may need repairs, consent, staffing and operating funds before it can serve that purpose. The aim is useful provision and cooperation, not a presumption that every empty building can immediately become housing.

Charitable resources and accountability

Charities can lawfully hold reserves and investments, including to maintain assets, fund future work and manage risk. Interest or investment income is not, by itself, evidence of a false charity. Public benefit is assessed against lawful purposes; not every charity has a duty to provide homelessness accommodation. Concerns should focus on promised benefit, actual delivery, restrictions, governance, conflicts and the applicable reporting requirements. [D69-D74]

Cooperation and shared services may make resources more useful. The relevant regulators differ across England and Wales, Scotland and Northern Ireland. Scrutiny should allow evidence-based reporting of misuse while preserving privacy and avoiding allegations based only on an account balance. The same standard applies to public, commercial and resident-controlled organisations: explain the benefit, responsibilities and accessible remedy.

15 The Treasury public finance and higher GDP

The clarified fiscal design retains pooled national income and the Treasury, with borrowing, lending, trade and investment continuing. The earlier suggestion that settlements would send only optional spare tax to Westminster was superseded. The current proposal gives local service standards and payments greater priority within shared national finance; it does not create separate sovereign treasuries or allow each place to opt out of common obligations.

Budgets should distinguish capital construction, operating services, maintenance, replacement reserves, debt service and contingencies. A development loan cannot be treated as permanent income. Treasury responsibilities, parliamentary authority for taxation and spending, debt management and eligible local-authority borrowing remain relevant. Existing PWLB arrangements do not automatically make every proposed settlement eligible for a particular loan. [D83-D87]

National pooling also makes fairness between settlements possible. Places differ in age, disability needs, income, local costs and revenue. A community needing more care should not be penalised because it

attracts residents who cannot generate a large local tax base. Needs-based transfers, shared specialist services and national responsibilities are part of the design. Local accountability concerns the use and explanation of resources, not a withdrawal from solidarity.

How wider participation could support output

Higher real GDP is an explicit aim. The proposed mechanism has a demand side and a capacity side. Households with resources remaining after essential costs can buy, save and make choices. People with premises, tools, skills, finance, care and infrastructure can create useful goods and services. Affordable secure housing is intended to support both. The model seeks to widen participation in a market economy rather than abandon exchange, profit or investment.

GDP records production during a period, while wealth concerns assets held. Expenditure-based GDP includes consumption, investment, government spending and net exports. GDP can rise while income and ownership remain highly unequal. Its total does not tell us who benefits or whether environmental damage accompanies production. Describing such growth as achieved on false pretences is an ethical critique of the claim of public success; this paper does not allege fabricated national accounts. [D95]

Research gives reasons to examine distribution and opportunity without supplying a guaranteed settlement multiplier. An IMF working paper associates greater inequality with a stronger growth drag where intergenerational mobility is low, using cross-country models. A Bank of England survey study finds varied intended spending responses to a hypothetical payment, including a low response among people certain of future financial distress. Neither proves that every poorer household spends more or that a given transfer creates a predictable national GDP increase. [D92, D93]

Additional purchasing power also needs productive capacity. Investment, skills, innovation and reliable infrastructure can expand what the economy supplies; demand that outruns supply can raise prices. New settlements must add usable capacity and opportunity, not merely move purchases or jobs from one place to another. Retaining sterling does not guarantee its purchasing power, nor does a higher asset sale price necessarily represent additional useful production. [D96]

Concentration dependence and investment risk

The concern about a few dominant investors withdrawing if their preferences are not met is a concern about dependence and bargaining power. Calling that arrangement gambling expresses opposition to placing other people's security at risk without meaningful control. Long-term productive investment remains valuable. The aim is to diversify ownership, businesses and public capability so that the withdrawal of one powerful actor does not remove every practical option.

OECD product-market research identifies rising concentration and declining dynamism in its European data, while distinguishing efficient successful firms from entrenched positions with weak contestability. It does not establish UK land corruption or prove every large company is harmful. The proposal targets barriers to entry and unaccountable power through wider access to assets, competitive opportunities and dependable public provision. [D94]

Concentrated wealth can exist within capitalism. Dictatorship describes political power, and communism refers to different institutional ideas; neither follows as a definition from inequality alone. The argument here is for a market economy that distributes usable opportunity and protects dignity. People are the social

purpose of money, whether or not they can undertake paid work. A trading society benefits when more people can become customers, colleagues, neighbours, carers and creators. [D90]

Real GDP, GDP per person and productivity should be considered alongside disposable resources after essentials, housing security, service access, distribution of wealth and ecological condition. ONS's work beyond GDP supports a broader account of progress. The proposal seeks stronger productive growth whose benefits are accessible, while acknowledging that relocation, construction, environmental impacts, workforce constraints and national borrowing carry costs. It supplies an economic hypothesis and institutional direction, not a completed macroeconomic forecast. [D91]

16 Land control and the legitimacy of exclusion

Land is finite in location and function even when much of a map appears unbuilt. Legal title, leases, options, covenants, access rights, finance and regulatory capacity can each affect development. A promoter can control a site without owning it outright, while an access-strip owner or covenant beneficiary may hold a separate constraint. An investigation should identify the actual interest and decision before attributing motive.

The Scottish Land Commission's 2019 investigation records reported dependence and fear where ownership concentrates control of housing, jobs and local decisions. It did not verify the intimidation and retaliation allegations it received, and it is not a UK prevalence estimate. It nevertheless identifies a serious institutional question: can residents challenge a decision without risking other essentials controlled by the same actor? [L27]

Public and charitable landholders also deserve transparent scrutiny. The Crown Estate has a financial asset-management role, while a parliamentary answer about institutional farmland records a decision not to publish a consolidated holdings map. Those facts establish mandates or disclosure limits; they do not show that a particular site is being wrongfully withheld. Land registries, planning records, accounts, deeds and disclosure requests help distinguish stewardship, investment, delay and obstruction. [L22, L28, L29]

The moral question is whether inheritance or investment should confer effectively unlimited power to deny others a viable life. Birth into ownership is not a measure of greater human worth. Existing title and the ethical justification of a particular use are separate matters. Proposed reform should explain legitimate compensation, stewardship, access and remedies, including protection of people who rely on current arrangements.

National origin or ancestry should not become a licence for collective blame or deprivation of dignity. Fair lawful eligibility rules can be debated openly, but fear and identity do not settle land use, environmental capacity or responsibility for harm. The relevant scrutiny concerns conduct, power, public benefit and actual outcomes.

Current delivery routes include negotiated purchase, lease, community ownership, strategic allocations and statutory public land assembly. Compulsory purchase requires the applicable powers, process, public-interest case and compensation framework. A private proposer cannot simply take another person's land or exercise a development corporation's powers. Hope-value rules, council land-disposal duties, restrictive covenants and private rights need their own treatment. [L8, L9, L23, L35-L38]

Building control, environmental assessment, habitats duties, biodiversity requirements, water, sewage and energy permissions also remain distinct. New national planning and infrastructure reforms do not remove the need to check commencement and scope. The proposed protected entitlement should reduce arbitrary barriers while retaining effective measures against demonstrated harm. The planning and technical reference register preserves the principal routes investigated. [L11-L21, L42-L44]

17 Research and implementation elsewhere

Related systems have been researched and built. Their closest matches fall into settlement planning, ecological infrastructure, affordable housing institutions and public-community finance. No example in the reviewed material combines the complete UK-wide 5,000-to-50,000 system with the ten-mile gap and the proposed independent-living right. That is a scoped research finding, not proof that no similar initiative exists anywhere.

Bounded towns and integrated neighbourhoods

The Garden City model proposed a planned 32,000-person settlement, surrounding agriculture, employment and public facilities. Its connected Social Cities allowed further towns while retaining surrounding land. Community benefit from land value formed part of the financial idea. Letchworth began construction in 1903, and its Heritage Foundation describes continuing use of property income for community and landscape purposes. This is the closest historical planning relative identified, rather than experimental proof of the present model. [G1, G2]

Auroville's plan specifies 50,000 residents and a green belt of forests, farms and sanctuaries. It is a real settlement founded in 1968, but the project website's undated figure of around 3,300 is not an achieved 50,000-person city or a current census. The 2022 scholarly case study examines ecological experimentation alongside economic, growth and governance tensions, drawing partly on earlier lived research experience. Its spiritual foundation differs from the secular rights framework proposed here. [G3, G4]

Vauban in Freiburg is a built district of roughly 5,000-6,000 people. Municipal material describes low-energy building, resident building groups, solar systems, green space and services. Comparative transport research reports lower car ownership and driving than in a nearby district, with parking policy contributing to the explanation. It operates within Freiburg, whose wider services and economy are part of its context. It is a useful first-stage-scale reference, not an autonomous remote town. [G5, G6]

Cloughjordan Ecovillage combines housing, shared farming and renewable heat. A peer-reviewed chapter discusses its environmental design, governance, education and financial challenges. EVA Lanxmeer integrates homes, work, schools, farming and energy/water concepts; qualitative research examines how institutions and implementation connected. Wageningen's report documents resident green-space management with public and utility partners. These examples show that public bodies can be enabling partners as well as possible sources of obstruction. [G7-G10]

Local systems and floating homes

Feldheim provides an implemented village energy example using wind, biogas, heat systems, storage and local networks. Much wind output is exported. Operator and official accounts establish relevant

arrangements, rather than an independent whole-community life-cycle evaluation. It is not evidence for rooftop-solar-only autonomy or locally independent medicine and food. [G11, G12]

Schoonschip comprises 46 floating households with solar panels, batteries, heat pumps and a shared grid connection. It separates greywater and blackwater; the reviewed page describes further blackwater recovery as a future pilot, not confirmed completed treatment. Its sheltered-water setting makes it directly relevant to connected floating homes while limiting transfer to open-ocean conditions. [G13]

Access to land finance and secure housing

Marinaleda's self-build housing research describes municipal land, public finance, technical support and resident labour or paid construction. An official funding order separately records historical funding and delivery arrangements. The useful lesson is the assembly of land, money and assistance. A disabled person needs an alternative to a large manual-work obligation that is itself affordable; simply allowing payment for replacement labour may not provide one. Historical low monthly-payment claims are not present all-in construction costs. [G14, G15]

Champlain Housing Trust's shared-equity model combines entry assistance with continuing affordability and resident equity. A 2010 evaluation uses programme records to examine affordability, wealth, tenure and mobility, reporting comparatively low foreclosure and movement into market housing. Its results are historical and observational, and affordability was not perfectly unchanged. The model offers a concrete alternative to publicly supported homes losing their affordability at first resale. [G16, G17]

Uruguay's mutual-aid housing cooperatives provide a long-standing federation model involving collective property, self-management, technical assistance and mutual aid. Research examines education and the conditions for emergence and transfer. These are housing institutions, not capped ecological towns. Their participation requirements require explicit adaptation for people unable to perform physical construction. [G18, G19]

Thailand's Baan Mankong channels infrastructure subsidies and housing loans through organised low-income communities, with networks and public agencies. It often supports improvements in place or nearby, showing that opportunity need not always require relocation. The 2016 six-case fieldwork specifically documents arrangements for older, disabled and very poor residents excluded by ordinary savings requirements. This is particularly relevant to providing a route for someone starting without capital. It is case evidence rather than a representative national impact trial. [G20-G22]

Networks of smaller places

Polycentric development and borrowed size are relevant research concepts. A European study associates network connectivity with metropolitan functions while finding local population important. Connections can help settlements access capabilities beyond their own resident base, but they do not abolish distance or prove that a 50,000 cap maximises output. The proposal combines connected towns, local systems and accessible ownership, drawing on different precedents for different functions. [G23]

Table 5 The implementation precedents in one view

Place or programme	Country	Implemented component and limit
Garden City and Letchworth	UK	Bounded-town planning and community benefit from property income; the historical plan is not the complete modern system.

Place or programme	Country	Implemented component and limit
Auroville	India	Existing settlement with a 50,000-person plan; intended final scale unachieved.
Vauban	Germany	Built ecological urban district linked to a wider city.
Cloughjordan	Ireland	Built ecovillage with shared food, heat and governance.
EVA Lanxmeer	Netherlands	Built integrated district and resident green-space stewardship.
Feldheim	Germany	Local renewable electricity and heat arrangements in an existing village.
Schoonschip	Netherlands	Occupied connected floating neighbourhood on sheltered water.
Marinaleda	Spain	Public land, finance and assistance for self-build housing.
Champlain Housing Trust	USA	Operating shared-equity and land-stewardship institution.
Mutual-aid cooperatives	Uruguay	Collective ownership, assistance and federation of housing cooperatives.
Baan Mankong	Thailand	Implemented national support for community-led housing and infrastructure.

18 A voluntary transition with complete delivery

The transition begins by creating useful opportunities in suitable new locations while maintaining and improving existing places. People move because they gain a secure home and an affordable future. Participation should include residents without capital, disabled people, carers, older people, families, creative workers and prospective business owners. Existing support, employment and relationships should be considered before relocation, with a realistic option to remain.

As pressures reduce, former sites can be repaired, reused or restored where appropriate. Existing buildings, transport, social networks and embodied carbon are assets; they should not be discarded merely to make a national diagram look uniform. A final redistribution map is a counterfactual illustration, while the practical programme can combine new settlements, improvements in place and selective changes over time.

Plan the whole place and release usable stages

Each project needs the final spatial allocation and a funded sequence for housing, enterprise, utilities and staffed services. Growth should respond to need with capacity ahead of occupation. Reserve strategic sites and corridors early, install scalable modules where suitable, and define the public or private body responsible for each component. A development phase is complete when its promised provision can be used, not when only the houses are sold.

Payments should follow independently verified contractual milestones, with prompt payment for work actually accepted. Final occupation readiness is a separate coordination duty: a builder should not be held

responsible for a health-service staffing failure outside its contract, but residents should not be moved in on an unsupported assumption that the clinic will eventually operate. Performance security, maintenance funds and step-in arrangements can address non-delivery and operator failure.

A public capacity record should show occupied and committed households, utility capacity, school and care places, workforce, emergency access, transport, maintenance and the funds available for the next stage. Separate inherited service deficits from the additional demand created by the development. Report actual use and service availability rather than equating a planning obligation, reserved site or financial allocation with delivery.

The legal route can involve strategic allocation, an ordinary application, public development bodies or future legislation establishing the proposed entitlement. The chosen route affects land, contributions, acquisition, consent and accountability. Existing mechanisms for large sites and new settlements mean that current law is not an absolute ban on building new places. The proposed reform concerns fair access and the conditions under which people can create or retain a home. [L1-L10, L37, L38]

Learning without blocking the concept

The concept can be advanced without pretending to have completed every engineering or financial study. Before real occupation, the relevant design must establish the site's safety and the services being offered. Early projects can compare housing comfort, whole-life cost, maintenance, service reliability, household finances, business entry, social participation and ecological condition. Findings should change later stages where necessary.

The first demonstration should therefore test an integrated offer rather than select only well-resourced residents able to overcome gaps themselves. A scheme that succeeds only for people who already have money, mobility and administrative support would not address the problem that motivates this paper. Inclusion arrangements and the experience of applicants who cannot enter are part of the evaluation.

Higher real GDP remains an objective, measured alongside national costs and activity displaced from elsewhere. Wider ownership, productive investment, household spending power, reliable care and environmental restoration are intended mechanisms. The location pattern alone cannot guarantee those outcomes. Growth in averages should also be examined for people left behind.

19 Choices that remain open

The core direction is settled: complete connected places; planned growth from 5,000 to 50,000; permanent green zones; open movement; suitable housing and productive opportunity; infrastructure for every occupied household; local capability with shared specialist support; accessible democratic government; pooled national finance; higher real output and wider prosperity; and dignity independent of wealth or work capacity.

Several choices remain. The full-population map and ten-mile separation cannot both be retained under the mapped assumptions. Tenure, ownership limits, allocation, guarantees, land assembly and the treatment of inheritance need coherent terms. Local and shared service responsibilities need clear boundaries. Floating and ocean communities need a separate development path. A protected right to provide a home must be reconciled with ecological exclusions and third-party rights.

These are design decisions, not reasons to erase the purpose. A policy can protect land while giving people a realistic place to live; local control can coexist with national pooling; and markets can operate with wider ownership and dependable rights. The framework should be judged by whether it creates those practical combinations and provides remedies when it fails.

20 A home a stake and a future

Population, permission and sustainability meet in a simple practical question: can a person obtain a safe, affordable place from which to live, care, create, work where possible and belong? A system that recognises dignity while leaving every usable route unaffordable has not answered it. A settlement that advertises green technology while reproducing exclusion has not answered it either.

The proposal is to expand the opportunity itself. Build complete places in stages, retain their ecological boundaries, distribute everyday capability and connect specialised functions. Give residents secure access to homes and productive resources, with choices, support and accountable power. Retain the national economy while widening the number of people able to participate in it. Let the research inform scale and organisation honestly, including the lessons that complicate the plan.

The contribution is a combined design for housing, infrastructure, opportunity and rights. Its intended result is a future that can be entered by someone starting without wealth or an affordable way forward, with space for relationships, learning and natural growth. That is the standard against which its eventual legal and physical implementation should be assessed.

Appendix A Population research register

This register preserves the 43 scientific and methodological sources underlying the population discussion. An estimate, mean, association or model output is not treated as a universal residential limit. Primary links identify the publication; additional links include accessible manuscripts, data or corrections where the earlier catalogue supplied them.

P1 Neocortex size as a constraint on group size in primates

1992 | Journal of Human Evolution 22, 469-493 | Comparative analysis and evolutionary hypothesis

Evidence Compares primate neocortex measures with social-group sizes and extrapolates to humans. Finding Foundational source for the proposed human relationship-network size commonly rounded to 150. Limit A regression-based hypothesis about social relationships is not a maximum residential population. The human extrapolation and its uncertainty have been challenged directly [P2].

[Primary publication](#)

P2 Statistical reanalysis of the proposed human social network limit

2021 | Biology Letters 17, 20210158 | Statistical reanalysis

Evidence Reanalyses primate brain and group-size data with updated datasets and comparative statistical methods. Finding Human estimates vary markedly; reported 95% intervals include 4-520 and 2-336 in two analyses. Limit These are uncertainty intervals for extrapolations, not recommended group-size ranges. The paper challenges a precise universal number; it does not show unlimited social capacity.

[DOI 10.1098/rsbl.2021.0158](https://doi.org/10.1098/rsbl.2021.0158) | [Additional source 1](#)

P3 The complex structure of hunter-gatherer social networks

2007 | Proceedings of the Royal Society B | Cross-cultural quantitative analysis

Evidence Analyses 1,189 social groups in 339 hunter-gatherer societies using a compilation of ethnographies and fractal network theory. Finding Finds statistical organisation across several social scales rather than a single isolated residential group. Limit Ethnographic categories and historical sampling affect the results. Modern foraging societies are not unchanged replicas of Palaeolithic populations; compare the critique in [P5].

[DOI 10.1098/rspb.2007.0564](https://doi.org/10.1098/rspb.2007.0564) | [Additional source 1](#)

P4 Co-residence patterns in hunter-gatherer societies show unique human social structure

2011 | Science 331, 1286-1289 | Cross-cultural empirical analysis

Evidence Studies 32 present-day foraging societies, covering 5,067 individuals. Mean experienced band size was 28.2 adults. Finding Most adults in residential groups were genetically unrelated, with flexible residence patterns connecting people to larger networks. Limit The 28.2 figure counts adults and is a sample mean, not a maximum population or a total including children. Camp size must be distinguished from the wider society.

[DOI 10.1126/science.1199071](https://doi.org/10.1126/science.1199071) | [Additional source 1](#)

P5 Variability in the organization and size of hunter-gatherer groups: Foragers do not live in small-scale societies

2019 | Journal of Human Evolution 131, 96-108 | Ethnographic analysis and model comparison

Evidence Examines flexible residence and foraging networks, including Western Desert Australian social organisation. Finding Argues that small co-resident groups can draw on extensive networks of relationships rather than nest neatly inside fixed small societies. Limit A strong corrective to equating a camp with an entire society. It is not a universal replacement population threshold.

[DOI 10.1016/j.jhevol.2019.03.005](https://doi.org/10.1016/j.jhevol.2019.03.005) | [Additional source 1](#)

P6 Scaling of Hunter-Gatherer Camp Size and Human Sociality

2022 | Current Anthropology 63, 68-94 | Ethnographic dataset and spatial model

Evidence Compares population and residential area across mobile hunter-gatherer camps and models social interaction and scalar stress. Finding Shows that how much space a group occupies changes with group size and differs from the pattern in permanent settlements. Limit Camp layout, mobility and institutions matter. A fitted area-population relationship supplies neither a universal optimum nor an occupancy regulation.

[DOI 10.1086/719234](https://doi.org/10.1086/719234) | [Additional source 1](#)

P7 Experimental evidence for the influence of group size on cultural complexity

2013 | Nature 503, 389-391 | Controlled human experiment

Evidence Uses a dual-task computer game to test cultural transmission and skill accumulation in differently sized groups. Finding The authors report better preservation of complexity, more improvements and greater trait diversity in larger groups. Limit Task performance cannot establish an ideal town size. The interpretation was disputed by a published reanalysis [P8]; the authors also published a reply.

[DOI 10.1038/nature12774](https://doi.org/10.1038/nature12774)

P8 Group size and cultural complexity

2014 | Nature 511, E1 | Published reanalysis and scientific correspondence

Evidence Reexamines the experimental data and interpretation of the original experiment team [P7]. Finding Argues that a different performance assessment reverses the apparent advantage of larger groups. Limit This disagreement illustrates why outcome definition matters. It does not establish that smaller communities are universally superior. Read alongside the original experiment and its response.

[DOI 10.1038/nature13411](https://doi.org/10.1038/nature13411) | [DOI 10.1038/nature13412](https://doi.org/10.1038/nature13412)

P9 When the world's population took off: the springboard of the Neolithic Demographic Transition

2011 | Science 333, 560-561 | Comparative archaeological synthesis

Evidence Examines demographic signals in cemetery age profiles across the transition from foraging to farming. Finding An increased proportion of juvenile skeletons is interpreted as evidence of rising fertility and population growth. Limit Burial selection, preservation and age estimation affect cemetery profiles. A larger juvenile fraction is interpreted through a demographic model, not read as a direct census.

[Primary publication](#)

P10 Regional population collapse followed initial agriculture booms in mid-Holocene Europe

2013 | Nature Communications 4, 2486 | Radiocarbon proxy analysis with simulations

Evidence Tests demographic fluctuations in Central and Northwest Europe between 8,000 and 4,000 calibrated years BP. Finding Finds regional growth and decline after agriculture spread. The climate comparisons in this study did not explain the observed patterns. Limit The proposed internal causes remain speculative. Relative radiocarbon activity is not an exact headcount, and this study does not identify a universal carrying-capacity ceiling.

[DOI 10.1038/ncomms3486](https://doi.org/10.1038/ncomms3486) | [Additional source 1](#)

P11 European Neolithic societies showed early warning signals of population collapse

2016 | PNAS | Retrospective time-series and model analysis

Evidence Calculates early-warning statistics from summed archaeological radiocarbon date probability densities. Finding Reports statistical signals consistent with declining resilience before some reconstructed population collapses. Limit Retrospective signals do not provide a validated forecast for a modern town. Calibration, sampling and dependence in the proxy series require careful treatment [P30].

[DOI 10.1073/pnas.1602504113](https://doi.org/10.1073/pnas.1602504113) | [Additional source 1](#)

P12 Holocene fluctuations in human population demonstrate repeated links to food production and climate

2017 | PNAS 114, E10524-E10531 | Radiocarbon and subsistence analysis

Evidence Compares population proxies across Britain and Ireland with climate patterns and directly dated plants and animals. Finding Finds repeated downturns coinciding with climate reorganisation and shifts in food procurement. Challenges wholly internal explanations of Neolithic boom and bust. Limit Temporal correspondence and plausible mechanisms do not establish one cause for every decline. A correction exists and should accompany detailed reuse of the study.

[DOI 10.1073/pnas.1709190114](https://doi.org/10.1073/pnas.1709190114) | [Additional source 1](#)

P13 Bioarchaeology of Neolithic Çatalhöyük reveals fundamental transitions in health, mobility, and lifestyle in early farmers

2019 | PNAS 116, 12615-12623 | Bioarchaeology and settlement reconstruction

Evidence Combines human remains, settlement context and biogeochemical evidence for approximately 7100-5950 cal BCE in Anatolia. Finding The paper reports a Middle Period peak estimate of about 3,500-8,000 inhabitants and changing health, labour, mobility and interpersonal conflict across the settlement's history. Limit The population range is reconstructed, not counted. Some skeletal lesions are nonspecific; co-occurrence of crowding and harm does not isolate density as the sole cause.

[Primary publication](#) | [Additional source 1](#)

P14 Isotopes prove advanced, integral crop production, and stockbreeding strategies nourished Trypillia mega-populations

2023 | PNAS 120, e2312962120 | Stable-isotope and archaeological analysis

Evidence Analyses stable isotopes in archaeological food-system evidence from Copper Age Trypillia communities in eastern Europe. Finding Supports intensive cultivation, manuring and integrated livestock

practices capable of nourishing large settlements. Limit Stable isotopes inform diet and cultivation; they are not radiocarbon dates or direct population counts. Contemporaneous house occupancy remains a separate issue. A 2024 correction accompanies the paper.

[DOI 10.1073/pnas.2312962120](https://doi.org/10.1073/pnas.2312962120) | [DOI 10.1073/pnas.2406120121](https://doi.org/10.1073/pnas.2406120121)

P15 Modelling cultural responses to disease spread in Neolithic Trypillia mega-settlements

2024 | Journal of the Royal Society Interface 21, 20240313 | Epidemiological simulation grounded in site layout

Evidence Runs susceptible-infected-recovered-susceptible models on clustered networks and a Trypillia settlement plan, relevant to the fourth millennium BCE. Finding Lower occupation density or fewer interactions between residential clusters can reduce modelled disease spread. Limit Model plausibility is not direct proof of an ancient epidemic or deliberate distancing policy. Thresholds depend on the specified pathogen and contact assumptions.

[DOI 10.1098/rsif.2024.0313](https://doi.org/10.1098/rsif.2024.0313) | [Additional source 1](#)

P16 The Pre-History of Urban Scaling

2014 | PLOS ONE 9, e87902 | Archaeological settlement dataset and scaling model

Priority study discussed substantively in Section 2.

[DOI 10.1371/journal.pone.0087902](https://doi.org/10.1371/journal.pone.0087902)

P17 Settlement scaling and increasing returns in an ancient society

2015 | Science Advances 1, e1400066 | Archaeological quantitative analysis

Evidence Examines monuments and house-size evidence from settlements in the pre-Hispanic Basin of Mexico. Finding Finds patterns consistent with increasing returns to socioeconomic production as settlement population rises. Limit Output proxies do not measure everybody's welfare. The findings show why a larger population may confer benefits as well as costs; they do not prove unlimited growth.

[DOI 10.1126/sciadv.1400066](https://doi.org/10.1126/sciadv.1400066) | [Additional source 1](#)

P18 Population growth and collapse in a multiagent model of the Kayenta Anasazi in Long House Valley

2002 | PNAS 99, 7275-7279 | Agent-based model tested against archaeological patterns

Evidence Combines settlement records, geomorphology, pollen and tree-ring climate evidence in a 96 km² Arizona valley, focusing on CE 200-1300. Finding Models households, maize production, settlement decisions and nutritional constraints; reproduces major features of population and spatial change. Limit A close fit is not unique causal proof. The assumptions about farming, household behaviour and resources restrict transfer to other places.

[DOI 10.1073/pnas.092080799](https://doi.org/10.1073/pnas.092080799) | [Additional source 1](#)

P19 Development and disintegration of Maya political systems in response to climate change

2012 | Science 338, 788-791 | Palaeoclimate and historical archaeological comparison

Evidence Compares a precisely dated, subannual cave-climate record from Belize with historical sequences recorded on Maya monuments. Finding Associates wetter conditions with expansion and later drying with political fragmentation and decline during parts of the first and early second millennia CE.

Limit Regional timing varies. The study's causal interpretation should not be treated as a universal account of Maya history or evidence that a particular headcount was exceeded.

[Primary publication](#)

P20 Diachronic modeling of the population within the medieval Greater Angkor Region settlement complex

2021 | Science Advances 7, eabf8441 | Lidar and archaeological demographic modelling

Evidence Combines lidar, excavation, radiocarbon dates and machine learning to reconstruct settlement growth in medieval Cambodia. Finding Estimates approximately 700,000-900,000 inhabitants in the Greater Angkor Region at its thirteenth-century peak. Limit This refers to an extensive settlement region, not a single tightly packed neighbourhood. Household assumptions and spatial boundaries affect the estimate; it is not a demonstrated optimum.

[DOI 10.1126/sciadv.abf8441](https://doi.org/10.1126/sciadv.abf8441) | [Additional source 1](#)

P21 Island-wide characterization of agricultural production challenges the demographic collapse hypothesis for Rapa Nui (Easter Island)

2024 | Science Advances 10, eado1459 | Remote sensing and agricultural-capacity reconstruction

Evidence Uses shortwave infrared satellite imagery and machine learning to estimate island-wide rock-garden extent. Finding Finds less agricultural infrastructure than some earlier estimates, challenging the assumed large pre-contact population underlying a common collapse narrative. Limit Crop yield, diet, classification error and other food sources affect capacity estimates. This is a specific test of Rapa Nui claims, not proof that resource overshoot never occurs.

[DOI 10.1126/sciadv.ado1459](https://doi.org/10.1126/sciadv.ado1459) | [Additional source 1](#)

P22 Ancient Rapanui genomes reveal resilience and pre-European contact with the Americas

2024 | Nature | Ancient DNA and radiocarbon dating

Evidence Sequences genomes from 15 ancient Rapanui individuals, radiocarbon dated to CE 1670-1950, and models earlier population history. Finding Finds no genetic evidence for the proposed severe seventeenth-century population collapse. Limit Genetic effective population size is not census population. Inferences depend on sampling and demographic models; absence of a bottleneck signal does not exclude every local or short-lived hardship.

[DOI 10.1038/s41586-024-07881-4](https://doi.org/10.1038/s41586-024-07881-4) | [Additional source 1](#)

P23 Quantitative historical analysis uncovers a single dimension of complexity that structures global variation in human social organization

2018 | PNAS | Comparative historical database analysis

Evidence Uses Seshat historical and archaeological coding and principal-component analysis to compare dimensions of social organisation across world regions. Finding Finds strong covariation between social scale, governance, economic organisation and information systems. Limit Results depend on coding, missing evidence and variable choice. A shared statistical dimension does not prove an inevitable evolutionary ladder or establish a population ceiling. Published online in 2017; journal issue in 2018.

[Primary publication](#) | [Additional source 1](#)

P24 The IntCal20 Northern Hemisphere Radiocarbon Age Calibration Curve (0-55 cal kBP)

2020 | Radiocarbon 62, 725-757 | Calibration reference and methods

Evidence Integrates independently dated evidence, including tree rings and other archives, to calibrate Northern Hemisphere radiocarbon measurements. Finding Provides the conversion from radiocarbon age to calendar-age probability over a range extending to 55,000 calibrated years BP. Limit Calibration does not remove all uncertainty. Geographic and marine-reservoir effects require appropriate treatment. Dating an organic sample does not directly date every associated structure or count residents.

[Primary publication](#)

P25 Bayesian Analysis of Radiocarbon Dates

2009 | Radiocarbon 51, 337-360 | Chronological modelling methods

Evidence Presents Bayesian models that combine radiocarbon evidence with archaeological ordering, phases and other prior information using OxCal. Finding Allows explicit estimation of event timing, occupation phases and durations rather than reliance on isolated date midpoints. Limit Modelled precision depends on the correctness of context and ordering assumptions. Check outliers, model agreement and sensitivity before deciding that buildings were occupied simultaneously.

[Primary publication](#)

P26 Correcting temporal frequency distributions for taphonomic bias

2009 | Journal of Archaeological Science 36, 1715-1724 | Preservation-bias model

Evidence Uses dated geological deposits to investigate how time-dependent loss of evidence changes archaeological frequency distributions. Finding Shows why an apparent increase toward the present can arise partly because older evidence has been destroyed or buried. Limit A general correction may not match a particular local landscape or material. Preservation processes must be tested, not treated as a universally solved adjustment.

[Primary publication](#) | [Additional source 1](#)

P27 The use of summed radiocarbon probability distributions in archaeology: a review of methods

2012 | Journal of Archaeological Science | Methods review with empirical testing

Evidence Uses 2,996 Australian archaeological radiocarbon dates to explore sample size, calibration effects and preservation corrections. Finding Demonstrates that date-series construction choices can materially change inferred population patterns. Limit Its proposed numerical rules, including minimum sample sizes and smoothing windows, are recommendations from a particular analysis, not timeless universal standards. Read with later work [P29-P31].

[Primary publication](#)

P28 Reconstructing regional population fluctuations in the European Neolithic using radiocarbon dates: a new case-study using an improved method

2014 | Journal of Archaeological Science 52, 549-557 | Statistical methods and archaeological application

Evidence Tests population-proxy fluctuations in 12 European regions between approximately 8,000 and 4,000 years BP. Finding Improves statistical testing of radiocarbon distributions and regional departures

from demographic expectations. Limit Significance is conditional on the chosen null model and sampling treatment. It does not convert a probability distribution into exact population counts.

[Primary publication](#) | [Additional source 1](#)

P29 Summed radiocarbon calibrations as a population proxy: a critical evaluation using a realistic simulation approach

2014 | Journal of Archaeological Science 52, 591-608 | Simulation-based methodological critique

Evidence Simulates the relationship between known demographic histories and recovered summed radiocarbon distributions. Finding Tests whether population signals survive the production, preservation, discovery and dating processes that create archaeological samples. Limit Visible peaks and troughs require formal validation. A demographic explanation cannot be assumed merely because a curve looks like growth and collapse.

[Primary publication](#) | [Additional source 1](#)

P30 Statistical Inference of Prehistoric Demography from Frequency Distributions of Radiocarbon Dates: A Review and a Guide for the Perplexed

2022 | Journal of Archaeological Method and Theory 29, 1387-1418 | Critical methods review

Evidence Compares reconstruction, null-hypothesis tests and model-fitting approaches to radiocarbon population inference. Finding Explains why sampling, calibration and ambiguity about what is being counted can generate misleading demographic patterns. Limit A useful quality-control reference for this whole catalogue. It explains both the promise and the limitations of the methods rather than rejecting all archaeological demographic inference.

[DOI 10.1007/s10816-022-09559-5](https://doi.org/10.1007/s10816-022-09559-5)

P31 Inference from Large Sets of Radiocarbon Dates: Software and Methods

2021 | Radiocarbon | Reproducible software and methods paper

Evidence Introduces rcarbon tools for calibration, aggregation, statistical tests and spatial analysis of radiocarbon datasets. Finding Provides practical methods for transparent analysis and comparison of archaeological date collections. Limit Software does not establish the validity of a population proxy. Preserve raw data, context, calibration settings, binning choices and code; test how reasonable alternatives change conclusions.

[Primary publication](#)

P32 On the distinction between density and crowding: Some implications for future research

1972 | Psychological Review 79, 275-277 | Conceptual scientific paper

Evidence Separates objective density from the psychological experience of crowding. Finding Establishes why people per unit area and experienced lack of space or control should be measured separately. Limit This is a foundational conceptual distinction, not an experiment establishing a threshold. It should guide the selection of empirical outcomes and explanatory variables.

[Primary publication](#)

P33 Report of the systematic review on the effect of household crowding on health

2018 | WHO Housing and Health Guidelines | Official systematic evidence review

Evidence Reviews studies relating household crowding to infectious disease and other health outcomes to support WHO housing guidance. Finding Provides a direct evidence base for evaluating inadequate space within dwellings and its health implications. Limit Definitions and study quality vary by outcome. Household crowding is not the same as neighbourhood density or total town population; the review does not set a universal town-size limit.

[Primary publication](#) | [Additional source 1](#)

P34 City living and urban upbringing affect neural social stress processing in humans

2011 | Nature 474, 498-501 | Human experimental neuroimaging with observational exposure measures

Evidence Tests social-stress responses in healthy volunteers and relates brain activation to current urban living and urban upbringing. Finding Reports different associations with amygdala and regulatory brain-region responses. Limit Residence was not randomly assigned. Urbanicity bundles many exposures, and brain activation is not itself a diagnosis or a count of residents beyond a safe threshold.

[DOI 10.1038/nature10190](https://doi.org/10.1038/nature10190)

P35 Growth, innovation, scaling, and the pace of life in cities

2007 | PNAS 104, 7301-7306 | Comparative urban data and mathematical modelling

Evidence Examines how infrastructure and socioeconomic indicators change with city population across urban systems. Finding Reports economies of scale for some infrastructure and faster-than-proportional increases for some social outputs and costs. Limit These are statistical relationships, not physical laws guaranteeing outcomes in every city. Boundary definitions, variation and contrary results matter [P36].

[DOI 10.1073/pnas.0610172104](https://doi.org/10.1073/pnas.0610172104)

P36 Constructing cities, deconstructing scaling laws

2015 | Journal of the Royal Society Interface 12, 20140745 | Empirical robustness and boundary-sensitivity analysis

Evidence Constructs thousands of city definitions using commuting and population-density thresholds in England and Wales. Finding Finds that population alone does not sufficiently describe cities; many indicators scale approximately linearly and nonlinear exponents can vary with boundaries. Limit A direct warning against applying one urban scaling equation everywhere. Administrative towns, built-up areas and commuting regions are not interchangeable units.

[DOI 10.1098/rsif.2014.0745](https://doi.org/10.1098/rsif.2014.0745) | [Additional source 1](#)

P37 The Economics of Density: Evidence from the Berlin Wall

2015 | Econometrica 83, 2127-2189 | Natural-experiment setting and structural economic model

Evidence Uses thousands of Berlin city blocks in 1936, 1986 and 2006 and variation arising from division and reunification. Finding Estimates local production and residential externalities and how accessibility changes urban activity. Limit The historical setting strengthens identification, but structural assumptions still matter. Productivity and property prices are not complete measures of welfare or ecological capacity.

[DOI 10.3982/ECTA10876](https://doi.org/10.3982/ECTA10876) | [Additional source 1](#)

P38 Population growth and earth's human carrying capacity

1995 | Science 269, 341-346 | Analytical synthesis and mathematical models

Evidence Examines how natural constraints interact with human choices in population-support capacity. Finding Concludes that human carrying capacity is dynamic and uncertain, depending on economic, environmental, cultural and demographic choices. Limit This provides a framework, not a single verified maximum for Earth or a settlement. Any numerical estimate must specify consumption, technology, distribution, trade and environmental conditions.

[DOI 10.1126/science.7618100](https://doi.org/10.1126/science.7618100) | [Additional source 1](#)

P39 Feeding ten billion people is possible within four terrestrial planetary boundaries

2020 | Nature Sustainability 3, 200-208 | Spatially explicit food-system scenario modelling

Evidence Models agriculture against constraints on biodiversity, land use, freshwater and nitrogen flows. Finding Under the analysed boundaries, the model supports 3.4 billion people with the existing system versus 10.2 billion after specified production and consumption changes. Limit These are conditional model outputs, not observed carrying capacities or a recommendation about population. The study covers four boundaries and particular dietary and agricultural assumptions.

[DOI 10.1038/s41893-019-0465-1](https://doi.org/10.1038/s41893-019-0465-1) | [Additional source 1](#)

P40 A good life for all within planetary boundaries

2018 | Nature Sustainability 1, 88-95 | Cross-national resource and social-outcome analysis

Evidence Compares resource use and indicators of basic needs and wellbeing across more than 150 countries. Finding Examines whether social outcomes are achieved within allocated biophysical limits, connecting human welfare with resource consumption. Limit Country averages hide inequality. Boundary allocation and wellbeing thresholds involve explicit analytical choices; the paper is not a settlement-population calculator.

[DOI 10.1038/s41893-018-0021-4](https://doi.org/10.1038/s41893-018-0021-4) | [Additional source 1](#)

P41 A general framework for analyzing sustainability of social-ecological systems

2009 | Science 325, 419-422 | Research synthesis and analytical framework

Evidence Organises evidence on resource systems, resource users, governance and interactions in social-ecological systems. Finding Explains why resource outcomes depend on institutions and local conditions as well as the number of users. Limit The framework guides comparative studies; it supplies no universal numerical capacity. Governance should be measured rather than assumed to improve or deteriorate automatically with size.

[Primary publication](#)

P42 Death squared: the explosive growth and demise of a mouse population

1973 | Proceedings of the Royal Society of Medicine 66, 80-88 | Captive mouse experiment

Evidence Reports growth and eventual demographic failure in an enclosed mouse population, including changes in social and reproductive behaviour. Finding Relevant to the history of ideas about crowding, social roles and the so-called behavioural sink. Limit Captive mice could not migrate or redesign

institutions as humans can. This experiment does not establish a human village or city limit, and its social-role interpretation is not a measure of human redundancy.

[DOI 10.1177/00359157730661P202](https://doi.org/10.1177/00359157730661P202) | [Additional source 1](#)

P43 Constraining the population size estimates of the pre-Columbian Casarabe Culture of Amazonian Bolivia

2025 | PLOS ONE 20, e0325104 | Archaeological reconstruction and population modelling

Priority study discussed substantively in Section 2.

[DOI 10.1371/journal.pone.0325104](https://doi.org/10.1371/journal.pone.0325104)

Appendix B Proposed independent living protections

Policy schedule for the proposed Independent Living and Limits on Local Authority Powers framework. These are proposed protections, not enacted permission or a substitute for the applicable law. Parliamentary drafting, devolved implementation, funding and consequential amendments would be required.

1 Purpose and beneficiaries

Establish a protected route to a safe, affordable home for individuals, households and resident-controlled arrangements on owned land or land occupied with legally effective owner consent. Include disabled people, children and people unable to undertake physical work. Protection does not depend on first becoming destitute.

2 A home lawful by right

Give qualifying occupation and modest necessary works statutory authorisation across suitable conventional, modular, mobile and relocatable forms. The route does not transfer another person's land or override valid occupation rights.

3 Accessible notification

Use free notification for essential records and emergency access. Do not turn it into discretionary approval; an administrative omission alone does not justify loss of the home.

4 A duty to assist

Require accessible practical help with site conditions, construction, energy, water, sanitation and available support. Advice identifies the problem and feasible remedies, rather than merely rejecting a housing form.

5 Limits on unilateral coercion

Require independent court authorisation for compulsory permanent interference with a protected home. Low price, unconventional appearance, supplier independence or the prospect of higher land value is insufficient alone.

6 Evidence and proportionality

Require an express legal ground and credible evidence of serious harm or substantial risk. Consider residents, neighbours, protected environmental interests, displacement harm and less intrusive measures.

7 Preserving occupation

Prefer effective repairs, treatment, drainage, limited works or consensual movement within a site. Provide assistance and realistic time where the issue can safely be resolved.

8 No displacement into homelessness

Secure an actually available, affordable, safe, accessible and suitable alternative before planned displacement. Consider disability, care, livelihood, household needs and continuity. Do not penalise resulting homelessness as the resident's fault.

9 Emergency protection

Retain necessary evacuation to prevent imminent serious injury or loss of life, with safe temporary accommodation and prompt independent review of continued exclusion. Emergency powers do not bypass permanent housing safeguards.

10 Independent household systems

Allow equivalent lawful energy, water, sanitation and food-growing systems. Do not compel purchase of an unused commercial utility service solely because a supplier operates nearby. Maintain taxation and necessary safety and pollution duties.

11 Performance and construction choice

Publish proportionate measurable standards allowing equivalent materials, removable supports and local manufacture. Apply scrutiny to conventional homes too, with accessible verification and assistance where needed.

12 Land and wildlife

Protect neighbours, access, habitats and the settlement's permanent green zones. Define exclusions transparently with independent review, evidence and a practical route to suitable living space.

13 Protection from speculative displacement

Do not treat a developer's commercial preference as sufficient grounds for removal. Public acquisition follows distinct statutory process, scrutiny, compensation and suitable housing safeguards.

14 Effective remedies

Provide declarations, injunctions, restoration where practicable and compensation for unlawful interference. Require intelligible reasons, relevant disclosure and accessible proceedings with costs assistance where necessary.

15 Existing homes and transition

Provide a route to protection without first abandoning the home. Review pending action based solely on absent permission. Changes to existing court orders require the competent court; serious demonstrated harm remains addressable.

16 Implementation across the UK

Use the appropriate legislation and procedures in all four nations, identify courts, fund duties and amend conflicting powers. Independently report displacement, homelessness, environmental and safety outcomes, remedies and access.

Appendix C Legal routes and implementation notes

These notes retain practical distinctions from the national legal research. Procedures depend on the nation, decision, notice, application date and current rules. They describe typical routes at the paper date, not a calculation of a deadline for an unidentified case.

Table 6 Typical application refusal appeal periods

Jurisdiction	Usual period	Important distinction
England	Six months for ordinary refusals; twelve weeks for householder refusals.	Related enforcement can shorten the period. The cited guide concerns applications dated on or after 1 April 2026. [L47]
Wales	Six months for ordinary refusals; twelve weeks for householder refusals.	Related enforcement may alter the period; use the correct Welsh appeal category. [L49, L51]
Scotland	Normally three months for planning application appeals to Ministers.	The decision identifies whether a local review or Ministers route applies. A local review body comprises councillors. [L48]
Northern Ireland	Normally four months from notification.	PAC guidance also specifies the applicable non-determination period. [L52]
Enforcement notices	Before the notice takes effect, under the relevant route.	Do not substitute an ordinary refusal period or assume every other enforcement measure is suspended. [L46, L48, L50, L52]

In England, section 174(2) grounds distinguish: permission should be granted; alleged matters did not occur; no breach; enforcement time-barred; defective required service; excessive steps; and insufficient compliance time. Availability, fees, previous applications and transitional rules matter. A valid appeal generally suspends the enforcement notice itself pending determination, subject to the statutory exception; other measures have their own rules. [L46, L64]

Court routes differ. The specified planning judicial-review claims under CPR 54.5(5) have a six-week period; the normal permission application for an English or Welsh section 289 enforcement legal appeal is within 28 days after notice of the decision. Neither is a universal UK court deadline. Successful planning appeals do not automatically recover costs: unreasonable behaviour causing unnecessary or wasted expense is required. [L53, L54, L56]

Technical duties and reforms

Building control is separate from planning. England's Future Homes and Buildings Standards regulations generally commence on 24 March 2027, with specified higher-risk provisions on 24 September 2027 and transitional arrangements. The published policy includes on-site renewable generation; the proposal's roof-solar ambition should not be confused with a requirement already applying to every UK dwelling. [L11-L13]

For English development within scope, biodiversity net gain generally requires at least 10%, with off-site gains and significant on-site gains maintained for at least 30 years. Exemptions and special arrangements apply. The project's permanent green zones express a longer protection aim. Environmental-impact and habitats assessment remain distinct, and new Environmental Delivery Plans are limited by their legal scope, area and stage. [L14-L17, L21, L44]

Water supplies, sewage discharges and electricity generation, distribution and supply require the appropriate technical and regulatory route. Construction choice does not remove performance duties. Land acquisition, council disposal, covenants and development-corporation powers also need separate legal authority. Devolved equivalents must be used rather than applying an English technical table throughout the UK. [L8-L11, L18-L23, L35-L38]

The safeguards proposed in this paper include a substantive entitlement and assistance duties, not only procedural appeal. No statutory text cited here already creates the complete independent-living right or guarantees success in a particular case.

Appendix D Topic coverage

Table 7 Coverage of the research and design

Topic	Location
Group size and social evolution	Sections 2 and 3; Appendix A
Archaeology and radiocarbon methods	Section 3; P9-P31 and P43
Both priority PLOS ONE studies	Section 2; P16 and P43
The 50,000 rationale and natural growth	Sections 2 and 8
UK population maps and ten-mile gaps	Section 9 and Figure 2
Greenfield land farms estates gardens and golf	Sections 9 and 16
Alternative dwellings foundations and panels	Section 10; H1-H14
Tree ships land boats and ocean networks	Sections 10 and 11
Food waste and marine ecology	Section 11; H16-H20
Energy water sewage recycling and farming	Section 11
Schools hospitals universities and care homes	Section 12
Transport communications servers and sensors	Section 12

Topic	Location
Police defence and family life	Section 12
Ownership grants loans and mortgages	Section 13
One-home principle and speculation	Section 13
National planning law and successful challenges	Section 6
A substantive right to provide a home	Section 7; Appendix B
UN law disability rights and possible submissions	Sections 5-7
Anonymous experience healthcare and assessment access	Section 5
Creative identity Project 67 and Green Tank	Sections 5 and 12
Displacement rents supply quality and migration	Sections 4 and 10
Local government openness and bureaucracy	Sections 14 and 15
Religion shared space and charitable resources	Section 14
Treasury pooled finance borrowing and lending	Section 15
Higher GDP wealth opportunity and investor dependence	Section 15
Land ownership inheritance and concentrated power	Section 16
Research and implementation internationally	Section 17; G1-G23
Stages payment infrastructure and voluntary transition	Sections 8 and 18
No borders inclusion dignity and democratic disagreement	Sections 7 8 and 14
Open design choices and honest limits	Sections 9 and 19

Reference register

P1-P43 are given in Appendix A. The following source codes identify the further research and official material. Publication dates and access notes distinguish historical findings, current guidance, project descriptions and proposed work. Some publication titles are shortened or described; primary links and DOIs identify the works. The scientific catalogue and international comparison include sources assessed through abstracts or institutional records; those are not presented as full-text evaluations. Legal statements concern the paper date and the jurisdiction specified.

Housing construction and marine stewardship

[H1] Open Systems Lab, WikiHouse: foundation guide and site preparation. Technical guidance for a building system.

[Open primary source](#) | [Additional primary source 1](#)

[H2] Wikkellhouse: maintenance and relocation manual. Manufacturer evidence for removable supports and upkeep requirements.

[Open primary source](#)

[H3] LILAC cooperative: community overview and construction and energy description. First-party evidence of an existing community.

[Open primary source](#) | [Additional primary source 1](#)

[H4] Prefabricated natural plant-fibre panel thermal testing. Building Services Engineering Research and Technology 34(4), 369-380 (2013). DOI 10.1177/0143624412450023.

[Open primary source](#)

[H5] Experimental hemp-lime building performance. Construction and Building Materials 36, 270-275 (2012). DOI 10.1016/j.conbuildmat.2012.04.123. Additional institutional structural research.

[Open primary source](#) | [Additional primary source 1](#)

[H6] CobBauge drying and shrinkage monitoring. Case Studies in Construction Materials 25 (2026). DOI 10.1016/j.cscm.2026.e06380. Additional project background.

[Open primary source](#) | [Additional primary source 1](#)

[H7] Low Carbon Trust: Earthship Brighton. Community-centre demonstration.

[Open primary source](#)

[H8] Land Ark: mobile dwelling portfolio. Manufacturer information, not an independent performance assessment.

[Open primary source](#)

[H9] Treehotel: 7th Room. Existing visitor accommodation, not evidence of a permanent mass-housing scheme.

[Open primary source](#)

[H10] BACA architects: Thames amphibious house. First-party project account.

[Open primary source](#)

[H11] European Climate-ADAPT: Maasbommel case study. Adaptation example; its legal and cost history is location- and date-specific.

[Open primary source](#)

[H12] Schoonschip: community site; EPRI: completed project account. Evidence for sheltered floating housing and shared energy.

[Open primary source](#) | [Additional primary source 1](#)

[H13] Wave-tank study of connected floating structures. Ocean Systems Engineering 14(3), 277-299 (2024). DOI 10.12989/ose.2024.14.3.277.

[Open primary source](#)

[H14] Wave-motion and connector-load computations for a modular floating island. International Journal of Steel Structures 25, 306-314 (2025). DOI 10.1007/s13296-025-00934-y.

[Open primary source](#)

[H15] UN-Habitat (2022): OCEANIX Busan design announcement. A proposal is not treated here as verified completion or occupied open-ocean housing.

[Open primary source](#)

[H16] UK government: food and drink waste hierarchy and animal-feed requirements. Current guidance checked for this note.

[Open primary source](#) | [Additional primary source 1](#)

[H17] NOAA National Ocean Service: nutrient pollution and oxygen depletion.

[Open primary source](#)

[H18] NOAA Fisheries: integrated multi-trophic aquaculture. Includes links to a scientific workshop white paper.

[Open primary source](#)

[H19] NOAA Fisheries: global study of shellfish and seaweed ecosystem services. Research-team account addressing benefits and site selection.

[Open primary source](#)

[H20] International Maritime Organization: MARPOL Annex V and garbage from ships.

[Open primary source](#)

Land planning and legal rights

[L1] National Planning Policy Framework introduction

MHCLG. Current English policy framework published 17 August 2026; accessible chapters published 29 September 2026. Statutory development-plan rule and the role of national policy.

[Open primary source](#)

[L2] NPPF housing policies HO1 to HO13

MHCLG. HO4 expressly addresses strategic sites, including new settlements, infrastructure, services, employment and environmental safeguards.

[Open primary source](#)

[L3] NPPF Annex A implementation

MHCLG. Current decision-making policy applies from publication; plan-making has transitional arrangements.

[Open primary source](#)

[L4] When is permission required

Official planning guidance. Explains development under section 55 and the requirement for planning permission under section 57 of the Town and Country Planning Act 1990.

[Open primary source](#)

[L5] Determining a planning application

Official guidance on sections 70(2) and 38(6). Some embedded NPPF paragraph references are historical; use sources 1 to 3 for current policy wording.

[Open primary source](#)

[L6] Town and Country Planning (Scotland) Act 1997

Principal Scottish statute, as amended. Sections 26, 28, 127 and 130 identify development, permission, enforcement and appeal powers.

[Open primary source](#)

[L7] Planning Act (Northern Ireland) 2011

Principal Northern Irish statute, as amended. Sections 23-24 and 138-143 concern development, permission and enforcement. Check current amendments and commencement.

[Open primary source](#)

[L8] Guidance on the compulsory purchase process

Current government guidance. Sections 162 to 172 cover new-town corporations; section 164 explains New Towns Act 1981 section 10 powers.

[Open primary source](#)

[L9] Power to remove hope value

MHCLG factsheet on the direction mechanism introduced by the Levelling-up and Regeneration Act 2023. Check current legislation and source 8 for subsequent amendments and eligibility.

[Open primary source](#)

[L10] Planning obligations

Official guidance on section 106 and the statutory tests in Community Infrastructure Levy Regulations 2010 regulation 122. Older NPPF paragraph references should not replace the current framework.

[Open primary source](#)

[L11] Building regulations approval

Official guide. Building Regulations 2010 operate separately from planning permission.

[Open primary source](#)

[L12] Future Homes and Buildings Standards circular 01 2026

MHCLG, 24 March 2026. General commencement on 24 March 2027; specified higher-risk work on 24 September 2027, with transitional provisions.

[Open primary source](#)

[L13] Heat and buildings investor factsheet

Government description of the Future Homes Standard, including solar panels on the majority of new homes. Distinguish policy description from detailed technical requirements.

[Open primary source](#)

[L14] Environmental Impact Assessment

Official guidance on the Town and Country Planning Environmental Impact Assessment Regulations 2017 for England.

[Open primary source](#)

[L15] Habitats regulations assessments

Official guidance on competent-authority assessment of plans and projects affecting protected sites.

[Open primary source](#)

[L16] Understanding biodiversity net gain

Current Defra guidance on the statutory biodiversity regime, exemptions and the minimum maintenance period.

[Open primary source](#)

[L17] Environmental Delivery Plans

Defra, MHCLG and Natural England. Collection published September 2026. Records geographic coverage, eligible impacts, capacity and consultation status.

[Open primary source](#)

[L18] Private Water Supplies Regulation 3 scope

Drinking Water Inspectorate. English private-supply rules cover relevant domestic purposes and harvested or recycled water intended for human consumption.

[Open primary source](#)

[L19] Water discharge environmental permits

Environment Agency. Distinguishes permitted, exempt, standard-rules and bespoke water-discharge activities.

[Open primary source](#)

[L20] Energy licence and exemption guidance

Ofgem. Generation, distribution and supply need assessment against licensing and exemption rules; Great Britain scope.

[Open primary source](#)

[L21] Conservation covenant agreements

Defra. Voluntary legal conservation agreements with designated responsible bodies, their duration, enforcement and variation.

[Open primary source](#)

[L22] Search for land and property information

HM Land Registry. England and Wales registers and plans; official copies are needed where legal proof of ownership is required.

[Open primary source](#)

[L23] Restrictive covenant tribunal guide T608

HMCTS. Explains restrictive covenants and applications under Law of Property Act 1925 section 84.

[Open primary source](#)

[L24] CMA housebuilding final report

Competition and Markets Authority, 26 February 2024. GB market study; see paragraph 4.119 and discussion of absorption rates, planning burdens, land banks and estate management.

[Open primary source](#)

[L25] CMA summary of housebuilding findings

CMA, 26 February 2024. Official summary of the distinction between speculative-development incentives, planning constraints and land banking.

[Open primary source](#)

[L26] CMA housebuilder information-sharing investigation

Final commitments accepted 30 October 2025. Seven firms agreed restrictions, compliance measures and a combined GBP100 million payment; no infringement decision was made.

[Open primary source](#)

[L27] Concentrated landownership investigation Scotland

Scottish Land Commission, 20 March 2019. Official evidence report. See executive summary and section 5.1.5 on reported fear of repercussions and its evidential limits.

[Open primary source](#)

[L28] The Crown Estate governance

Institutional primary source on its statutory asset-management role, public-corporation status and payment of net revenue profit to the Consolidated Fund.

[Open primary source](#)

[L29] Parliamentary answer on Church Commissioners land

Written answer, 11 June 2025. Describes registered farmland holdings and the decision not to publish a consolidated holdings map.

[Open primary source](#)

[L30] Environmental Information Regulations overview

ICO guidance. Access to recorded environmental information; Scotland has a separate environmental-information regime.

[Open primary source](#)

[L31] Commercial confidentiality under EIR

ICO guidance on exception 12(5)(e), its conditions and the presumption in favour of disclosure.

[Open primary source](#)

[L32] Welsh planning law consolidation

Welsh Government. The 2026 consolidation Acts require commencement; the new framework is anticipated for October 2027.

[Open primary source](#)

[L33] Scottish development plans

Scottish Government. NPF4 and local development plans form the statutory development plan under the Scottish legislation.

[Open primary source](#)

[L34] Northern Ireland current planning legislation

Department for Infrastructure. Planning Act Northern Ireland 2011 and the separate regulations governing its planning system.

[Open primary source](#)

[L35] Local Government Act 1972 section 123

Primary legislation on council land disposal and best consideration, subject to exceptions and consent.

[Open primary source](#)

[L36] Community ownership models

Cornwall Council guidance identifying community land trusts and community benefit societies among ownership models.

[Open primary source](#)

[L37] New Towns Taskforce report

September 2025 recommendations, including delivery bodies, infrastructure, stewardship and land assembly. Recommendations are not themselves permissions.

[Open primary source](#)

[L38] New Towns draft programme March 2026

Government consultation on seven proposed locations. A programme announcement or consultation is distinct from a site's development consent.

[Open primary source](#)

[L39] 2025 Mortgage Guarantee Scheme

HM Treasury. Permanent scheme from July 2025 supporting eligible 91 to 95 percent loan-to-value lending; it is not a zero-deposit scheme.

[Open primary source](#)

[L40] Same primary source as [P16].

[L41] Same primary source as [P43].

[L42] NPPF plan making PM1 to PM17

Current policy. PM9 concerns available, suitable and achievable land; PM12 concerns contributions; PM13 concerns local standards.

[Open primary source](#)

[L43] NPPF Green Belt policies GB1 to GB8

Current English Green Belt and grey-belt policy. Designated Green Belt is distinct from land simply being green or unbuilt.

[Open primary source](#)

[L44] Planning and Infrastructure Act Royal Assent

18 December 2025. Establishes enactment; individual provisions still require their applicable commencement and transitional checks.

[Open primary source](#)

[L45] Enforcement and post-permission matters: England

Official guidance on discretion, proportionality, notices, default works, offences, stop notices and injunctions.

[Open primary source](#)

[L46] Making an English enforcement-notice appeal

Planning Inspectorate. Seven statutory grounds, evidence, fees and restrictions relating to retrospective applications.

[Open primary source](#)

[L47] Planning appeals: applications dated on or after 1 April 2026

Current English procedure. Section 4 gives deadlines and enforcement-related exceptions. Earlier applications use their applicable guide.

[Open primary source](#)

[L48] A guide to planning appeals in Scotland

Scottish Government; updated 26 June 2026. Ministerial appeals, local review bodies and notice-specific time limits.

[Open primary source](#)

[L49] Planning appeals guidance: Wales

PEDW guidance. Ordinary refusals and disputed conditions normally have a six-month appeal period.

[Open primary source](#)

[L50] Appeal a planning enforcement notice: Wales

Welsh Government. Eligibility and the requirement to appeal before the notice takes effect.

[Open primary source](#)

[L51] Appeal a householder planning decision: Wales

Welsh Government. Twelve-week ordinary refusal deadline; separate enforcement-related application-appeal restrictions.

[Open primary source](#)

[L52] Planning Appeals Commission appeals guide

Northern Ireland. Four-month planning-appeal period and enforcement appeals before the effective date; fees and exceptions require checking.

[Open primary source](#)

[L53] Civil Procedure Rules Part 54

England and Wales. Rule 54.5(5) gives the six-week limit for specified planning judicial reviews.

[Open primary source](#)

[L54] Practice Direction 54D: Planning Court claims and appeals

Live heading is 54D despite the historical URL. Paragraph 6.1 gives the ordinary 28-day section 289 permission-application period.

[Open primary source](#)

[L55] Lawful development certificates: England

Official explanation of sections 191 and 192: existing and proposed development, legal tests and evidence.

[Open primary source](#)

[L56] Planning appeals and costs: England

Costs require unreasonable behaviour causing unnecessary or wasted expense. Unsupported reasons and inadequate investigation can be relevant.

[Open primary source](#)

[L57] Ombudsman advice to planning applicants

English Local Government and Social Care Ombudsman. Complaints cannot normally substitute for an available statutory appeal.

[Open primary source](#)

[L58] European Court of Human Rights. Grand Chamber planning and residential occupation judgment, application 27238/95 (2001).

Fact-specific human-rights judgment; no violation found on the facts.

[Open primary source](#)

[L59] Human Rights Act 1998, section 6

Public-authority duty to act compatibly with Convention rights, subject to the section's statutory qualifications.

[Open primary source](#)

[L60] House of Lords. Caravan permission and adequacy of reasons, [2004] UKHL 33.

Permission upheld; personal circumstances and adequately explained planning reasons.

[Open primary source](#)

[L61] Supreme Court. Planning decision and adequacy of reasons, [2017] UKSC 79.

Permission quashed for inadequate reasons; judicial review of legality.

[Open primary source](#)

[L62] One Planet Development practice guidance

Welsh Government, October 2012, TAN 6. Official low-impact countryside-development guidance; permission and management requirements still apply.

[Open primary source](#)

[L63] Freedom of information and environmental information in Scotland

Scottish Parliament briefing, 14 May 2025. Scottish EIR framework, review and Scottish Information Commissioner enforcement.

[Open primary source](#)

[L64] TCPA 1990, section 175: supplementary enforcement-appeal provisions

Section 175(4): effect of a valid section 174 appeal on the enforcement notice, subject to the stated court-order exception.

[Open primary source](#)

[L65] Lawful-use or development certificate appeals: England

Planning Inspectorate procedural guidance for challenging certificate decisions.

[Open primary source](#)

[L66] UN general comments on adequate housing and forced evictions

OHCHR compilation. General Comment 4, paragraphs 7-10; General Comment 7, paragraph 16. Treaty interpretation on dignity, affordability, land, self-provision and homelessness.

[Open primary source](#)

[L67] The UK's international human-rights obligations

Ministry of Justice. Records UK participation in the ICESCR and its economic and social rights commitments.

[Open primary source](#)

[L68] CESCR concluding observations on the UK, 2025

E/C.12/GBR/CO/7, 12 March 2025. Paragraphs 6-7 concern domestic enforceability; paragraphs 46-47 address adequate housing. This is committee assessment and recommendations.

[Open primary source](#)

[L69] Homelessness legislation overview: England

Official statutory guidance on the differing duties, eligibility, priority need and suitability of accommodation.

[Open primary source](#)

[L70] Homeless or threatened with homelessness: England

Paragraph 6.29 explains the statutory position for moveable structures, vehicles and vessels without a permitted place to reside.

[Open primary source](#)

[L71] Structure: Approved Document A

English technical guidance on structural elements, including foundations. Other nations have separate regimes.

[Open primary source](#)

[L72] Site preparation, contaminants and moisture: Approved Document C

English technical guidance concerning site conditions, contamination and moisture protection.

[Open primary source](#)

[L73] Volumetric Modular Construction research

Government research on modular construction, interfaces, inspection and performance evidence; not a certification of every modular home.

[Open primary source](#)

[L74] ONS population estimates, mid-2025

UK table gives 69,483,900. This is the dated baseline for the saved scenario map, not an instantaneous population count.

[Open primary source](#)

[L75] European Convention on Human Rights: official text

Articles 2 and 8 and Protocol 1 Article 1. Life, home and property protections have different scopes.

[Open primary source](#)

Housing disability services governance and economics

[D2] Care Act 2014, section 9: needs assessment

Statutory text checked in the Act PDF; current government guidance, paragraph 6.13, also checked.

[Open primary source](#)

[D3] Care Act 2014, sections 13, 18, 25 and 27: decisions, meeting needs, plans and review

Relevant framework; whether particular duties apply requires the individual assessment and decisions.

[Open primary source](#)

[D4] Care Act 2014, section 67: independent advocacy

Statutory text and current statutory guidance, chapter 7, checked.

[Open primary source](#)

[D5] Care and support statutory guidance, chapters 6, 7 and 13

Current government guidance checked, especially 6.13, 7.4 and 13.1-13.4.

[Open primary source](#)

[D6] Equality Act 2010: sections 6, 20-21 and 29

Statutory framework; EHRC guidance checked for disability and service access.

[Open primary source](#)

[D7] EHRC: disability discrimination

Official regulator explanation of disability, communication barriers and reasonable adjustments.

[Open primary source](#)

[D8] CQC: Meeting the Accessible Information Standard

Updated 10 March 2026; scope and six stages checked.

[Open primary source](#)

[D9] Housing Act 2004: sections 3-5 and 7

Section 3 concerns review of housing conditions; section 4 is the inspection provision. Indexed statutory text checked; some direct pages could not be fetched.

[Open primary source](#)

[D10] Government: Understanding and addressing the health risks of damp and mould in the home

Updated 1 April 2026. Guidance on urgency, medical evidence, hazards and housing fitness checked.

[Open primary source](#)

[D12] Landlord and Tenant Act 1985: sections 9A-11

Repair and fitness provisions identified through current government guidance. Individual tenancy and defect evidence needed.

[Open primary source](#)

[D13] Same primary source as [L70].

[D15] UN CRPD treaty text

Official treaty locator and indexed text; relevant articles are identified as issues to assess, not findings of violations.

[Open primary source](#)

[D16] UN: Article 19, living independently and being included in the community

Official indexed Article 19 text located; direct retrieval of the legacy page was blocked.

[Open primary source](#)

[D17] UN Treaty Collection: CRPD Optional Protocol participation

UK ratification recorded as 7 August 2009.

[Open primary source](#)

[D18] CRPD Committee: individual communications procedure, CRPD/C/5/2/Rev.1

Official procedure checked: writing, authorisation, substantiation and exhaustion exceptions.

[Open primary source](#)

[D19] OHCHR: Special Procedures submission guidance

No domestic exhaustion requirement; action is discretionary and recommendations cannot be enforced by the experts.

[Open primary source](#)

[D20] Supreme Court. Unincorporated treaties and domestic rights, [2021] UKSC 26.

Paragraphs 74-79 checked on the domestic status of unincorporated treaties.

[Open primary source](#)

[D21] Equality Act 2010: section 118, time limits

Six-month civil claim period and just-and-equitable discretion checked in statutory PDF.

[Open primary source](#)

[D22] Same primary source as [L53].**[D23] CRPD Committee: General Comment No. 5 (2017), CRPD/C/GC/5**

Official text reviewed, especially paragraphs 16, 24, 59-60 and 63-66 on personal choice, accessible/affordable support and independent living.

[Open primary source](#)

[D24] UN housing report: A/HRC/34/51 (2017), financialization of housing

Official UN catalogue and indexed summary located. Full PDF retrieval was blocked; used only to identify the report's stated topic as wider context.

[Open primary source](#)

[D25] OHCHR: Housing Special Rapporteur, individual complaints and allegations

Official indexed mandate information located; current general Special Procedures submission guidance reviewed separately.

[Open primary source](#)

[D26] OHCHR: Mandate of the Special Rapporteur on the rights of persons with disabilities

Official indexed mandate information identifies communications to states; no individual office-holder's name is required for the proposed submission.

[Open primary source](#)

[D27] Arts Council England: Access Support - Guidance for Support Workers, large print

Full official 23-page PDF reviewed. Version 1, updated December 2023; not presented as new 2026 guidance or a guarantee of current funding rates.

[Open primary source](#)

[D28] Arts Council England: Grants system support

Official page linked in the original correspondence and located in search. Direct retrieval was blocked; individual portal status is not verified by this page.

[Open primary source](#)

[D29] Arts Council England: Making a complaint

Official indexed complaints route located. Current detailed stages and deadlines could not be independently fetched in full.

[Open primary source](#)

[D30] United Nations: CRPD Article 30, participation in cultural life, recreation, leisure and sport

Official indexed treaty text located, including participation in cultural life and the opportunity to develop and use creative, artistic and intellectual potential. The Convention also addresses work in Article 27. See D15.

[Open primary source](#)

[D33] NHS: Guide to NHS waiting times in England

Current public page checked, including scope, 18-week consultant-led treatment right, exceptions and alternative-provider route. Referral receipt dates and clock status are needed before applying it to this case.

[Open primary source](#)

[D34] NHS England: Feedback and complaints about NHS services

Official guidance reviewed: written/email complaints, free advocacy, coordination across organisations, acknowledgement, agreed handling and written outcome.

[Open primary source](#)

[D35] Independent Case Examiner: How and when to bring a complaint

Updated 21 September 2026. Includes contracted health-assessment services, service-failure scope, exclusions, required final DWP response, normal six-month referral period and email/representative access.

[Open primary source](#)

[D36] NHS Ombudsman: What we can and cannot help with

Official current information located/reviewed on complaint investigation and possible remedies. The older Trust letter uses the Parliamentary and Health Service Ombudsman name.

[Open primary source](#)

[D37] National Audit Office: Improving local areas through developer funding - report findings (2025)

Official audit summary reviewed. England; developer contributions, negotiation capacity, viability and delivery weaknesses. Historical findings, not proof that a particular site supplied no infrastructure.

[Open primary source](#)

[D38] Same primary source as [L24].**[D39] ONS: Housing purchase affordability, UK: 2024**

Released 18 September 2025. Equivalised disposable household income and five-times-income indicator; not individual mortgage eligibility or a matched household/home comparison.

[Open primary source](#)

[D40] ONS: Private rental affordability, England, Wales and Northern Ireland: 2024

Released 18 August 2025. Average rent relative to median private-renter gross household income; statistical ratios are not every household's actual budget.

[Open primary source](#)

[D41] MHCLG / NatCen: English Private Landlord Survey 2024, main report

Published 5 December 2024. Over 9,000 respondents; direct deposit-registering landlords. Results must not be presented as a census of all UK landlords or company ownership.

[Open primary source](#)

[D42] MHCLG / Verian: Private rented sector tenants - research report

Relevant findings and methods reviewed: 1,517 English private renters, fieldwork 27 March-9 April 2024; weighted opt-in online panel, not a probability sample or current legal guidance.

[Open primary source](#)

[D43] IFS. Why do wealthy parents have wealthy children? (2021).

Primary research report; DOI 10.1920/re.ifs.2021.0196. Author summary and reported controls reviewed. Associations and decomposition do not establish that wealth is the sole cause of homeownership.

[Open primary source](#)

[D44] Displacement and estate demolition: multi-scalar place attachment among relocated social housing residents in London. Housing Studies (2022).

Housing Studies 37(9), 1686-1710. Author manuscript; abstract, sample/methods and relevant findings reviewed. Qualitative evidence from selected estates, not a national displacement rate.

[Open primary source](#)

[D45] The impact of supply constraints on house prices in England. Economic Journal (2016).

Economic Journal 126(591), 358-405; DOI 10.1111/ecoj.12213. Author institution's abstract reviewed: 353 English planning authorities, 1974-2008; historical identification assumptions apply.

[Open primary source](#)

[D46] City-wide effects of new housing supply: Evidence from moving chains. Journal of Urban Economics (2023).

Journal of Urban Economics 133, 103528; DOI 10.1016/j.jue.2022.103528. Author institution's abstract reviewed. Helsinki register-data study; full PDF retrieval failed. Transfer to the UK requires care.

[Open primary source](#)

[D47] OECD (2018): Rethinking Urban Sprawl - causes and consequences

Relevant infrastructure-cost and density passages reviewed. Research synthesis; effects vary with density, fragmentation and service type. It establishes no universal optimal city population.

[Open primary source](#)

[D48] Housing insecurity, mental health, sleep and hypertension. UK Household Longitudinal Study research (2024).

Social Science & Medicine 351, 116939; DOI 10.1016/j.socscimed.2024.116939. Author institution's structured abstract reviewed; observational panel with causal modelling, not an individual clinical diagnosis.

[Open primary source](#)

[D49] MHCLG: Statutory homelessness in England, financial year 2024-25

Relevant administrative statistics reviewed, especially households with children and prevention duties. Threatened homelessness is distinct from rough sleeping; reasons do not establish redevelopment or motive.

[Open primary source](#)

[D50] United Nations: Declaration on the Right to Development (1986), preamble and Articles 2 and 8

Official indexed text and UN explanatory material checked on 15 October 2026. Direct retrieval of the canonical page and OHCHR PDF was blocked. Used as an international development framework, not a new domestic planning entitlement.

[Open primary source](#)

[D51] UN Committee on Economic, Social and Cultural Rights: General Comment No. 4 (1991), right to adequate housing

Official compilation reviewed at the General Comment 4 passages, particularly paragraphs 6-9. Framework for adequacy and dignity; domestic remedies still require their own applicable legal basis.

[Open primary source](#)

[D52] UNFPA (2025): The real fertility crisis - official report summary

Published 10 June 2025; official summary reviewed. Academic research and a 14-country UNFPA/YouGov survey. International findings, not a UK-specific causal estimate or a forecast of inevitable population decline.

[Open primary source](#)

[D53] Migration and housing costs: what does international evidence imply for the UK? University of Greenwich report commissioned by MAC (2026).

Published 19 June 2026. Summary, methods and relevant findings reviewed. International literature review; 94 studies identified, 33 in the comparable core sample. Not a precise causal decomposition of all UK housing costs.

[Open primary source](#)

[D54] MHCLG: Policy statement - a roadmap for Section 106 delivery in England

Current text reviewed on 15 October 2026, including unsold units, buyer searches, temporary renegotiation and safeguards. Site-specific obligations and variations must be read before deciding breach or misuse.

[Open primary source](#)

[D55] Homes England: SAHP 2026-2036 Strategic Partnership guidance

Updated 15 April 2026; relevant milestone/expenditure and drawdown provisions reviewed. Strategic Partnership applications closed on that date. A precedent for conditional grant drawdown, not an open funding offer or the contract for this proposal.

[Open primary source](#)

[D56] NHS England: Specialised services

Official indexed text reviewed on 15 October 2026; direct retrieval encountered a verification page. Explains the specialist-team rationale for services not being present in every local hospital. An English service model, not a UK-wide staffing calculation.

[Open primary source](#)

[D57] US Department of Energy: Solar Integration - Distributed Energy Resources and Microgrids Basics

Technical explanation reviewed, including storage, controlled islanding, electrical safety and matching generation to load. Supports engineering possibilities; US billing arrangements are not imported into the UK proposal.

[Open primary source](#)

[D58] NIST. Developing Cyber-Resilient Systems, SP 800-160 Volume 2 Revision 1 (2021).

Official publication and PDF reviewed at the resilience framework and techniques, especially chapter 2 and appendix D: diversity, redundancy, segmentation and independent paths. Engineering guidance, not proof of the security of a proposed network.

[DOI 10.6028/NIST.SP.800-160v2r1](https://doi.org/10.6028/NIST.SP.800-160v2r1)

[D59] Life cycle assessment of a high-tech vertical decoupled aquaponic system for sustainable greenhouse production. Frontiers in Sustainability (2024).

Frontiers in Sustainability 5, 1422200. Primary pilot research in Greece: 12 experimental combinations; baby lettuce, rocket and rainbow trout; LCA using SimaPro, mass allocation and sensitivity scenarios. Methods, relevant results and limitations reviewed. This is not a UK commercial cost or full-diet self-sufficiency study.

[DOI 10.3389/frsus.2024.1422200](https://doi.org/10.3389/frsus.2024.1422200)

[D60] Same primary source as [L18].**[D61] Met Office: The UK land observation network**

Official technical explanation reviewed at station distribution, representative siting, automated observations, central transmission and the complementary role of radar/satellites. Supports a mixed observing network, not guaranteed complete detection.

[Open primary source](#)

[D62] Ministry of Defence: UK Operations - the Defence Contribution to Resilience, JDP 02, Fourth Edition
Current publication page and linked 152-page PDF reviewed at civil primacy and MACA approval, including paragraphs 1.4, 2.6, 3.6 and the interoperability annex. The page flags charging provisions as outdated since March 2024; those provisions are not relied on here.

[Open primary source](#)

[D63] Defra: Organic food - labelling and advertising rules

Updated 20 August 2025; current certification and production-rule requirements reviewed. Certification is not established merely by describing a growing system as aquaponic.

[Open primary source](#)

[D64] Cabinet Office: Guidance - Below-Threshold Contracts

Current text reviewed, especially paragraphs 13-17 and 22. Describes limited local reservation routes, PPN 005 and the 2026 English local-government order, with jurisdiction/authority distinctions. Not a blanket duty on all public bodies or private retailers to buy only local food.

[Open primary source](#)

[D65] Competition and Markets Authority: Care homes - consumer rights for residents and their families

Official guidance reviewed at care information, fees, fair contracts, dignity, complaints and the four national care regulators. Used for these principles, not as a comprehensive statement of every current funding or enforcement rule.

[Open primary source](#)

[D66] CQC: Regulation 9 - Person-centred care

Current English regulatory guidance reviewed, particularly assessment, preferences, consent, involvement, independence and cultural/religious needs. It does not prescribe a universal care-home bed ratio for a settlement.

[Open primary source](#)

[D67] EHRC: Article 9 - Freedom of thought, belief and religion

Official explanation and reproduced statutory text reviewed: holding/changing belief and lawful, necessary, proportionate restrictions on manifestation. The EHRC page describes its GB remit; the Human Rights Act source below supplies the UK statutory locator.

[Open primary source](#)

[D68] Human Rights Act 1998: Schedule 1, Article 9

Official indexed statutory text checked; direct legislation retrieval was limited. Article 9 text was also reviewed as reproduced by EHRC. Settlement membership or essential assistance should not become a state-imposed test of religious belief.

[Open primary source](#)

[D69] Charity Commission for England and Wales: What makes a charity - CC4

Current text reviewed at charitable purposes, advancement of religion and both aspects of public benefit. This is the England-and-Wales framework, not a presumption that every religious organisation qualifies or that every charity must provide housing.

[Open primary source](#)

[D70] Charity Commission for England and Wales: Investing charity money - CC14

Updated 1 August 2023; relevant trustee duties, cash deposits/interest, financial and social investment, private benefit and governing-document provisions reviewed. Holding investments is not itself evidence of fraud.

[Open primary source](#)

[D71] Charity Commission for England and Wales: Charity reserves - building resilience, CC19

Current text reviewed at sections 2-3: explaining reserves, maintaining services, excessive/insufficient reserves, and restricted/designated funds. A large asset balance is not necessarily freely spendable cash.

[Open primary source](#)

[D72] Charity Commission for England and Wales: Work with other charities

Official guidance reviewed at sharing premises/equipment, beneficiary interests, compatibility with purposes, independence and written agreements. Supports lawful collaboration rather than automatic compulsory sharing of every charity building.

[Open primary source](#)

[D73] OSCR: Charity investments guidance - What is an investment?

Published 16 April 2025; Scottish regulator explanation reviewed. Investments can help deliver charitable purposes. Detailed Scottish duties require that jurisdiction's legislation and guidance.

[Open primary source](#)

[D74] Charity Commission for Northern Ireland: Trustees' annual report and public benefit reporting - ARR08

June 2019 official guidance; introductory reporting/publication passages reviewed. Used to identify the Northern Irish reporting framework, not to assume its historical monetary thresholds are current.

[Open primary source](#)

[D75] United Nations: Charter of the United Nations, Articles 2 and 55-56

Official historic UN treaty PDF reviewed at these unchanged articles after the full-text web page returned a retrieval error. Older institutional numbers elsewhere in that PDF are not relied on. The cooperation/human-rights framework creates no UN process for issuing domestic planning permission.

[Open primary source](#)

[D76] House of Commons Library: How Parliament treats treaties - CBP 9247

Published 1 June 2021; relevant constitutional explanation reviewed: treaties do not automatically change UK domestic law; implementing changes can involve Parliament/devolved legislatures. Historical discussion of particular committees and treaty negotiations is not treated as current.

[Open primary source](#)

[D77] Council of Europe: European Charter of Local Self-Government - ETS 122

Official treaty text reviewed at Articles 2-4 and 8-11, including local responsibility, financial resources, equalisation and cooperation. A Council of Europe treaty, distinct from the UN Charter. Application, UK declarations and domestic enforceability must be checked for any specific legal action.

[Open primary source](#)

[D78] House of Commons Library: Local government finances - CBP 8431

Published 29 May 2026; current overview reviewed. Describes English local-government funding, including grants, retained business rates and council tax, with pointers to devolved statistics. Not a fiscal model for the proposed settlements.

[Open primary source](#)

[D79] Town and Country Planning Act 1990: section 57

Official indexed statutory text checked. Direct section retrieval encountered a content-type error. Used to identify the domestic permission framework, subject to statutory exceptions, development orders and subsequent amendments; Welsh consolidation requires separate commencement checks.

[Open primary source](#)

[D80] Town and Country Planning (Scotland) Act 1997: section 28

Official indexed statutory text checked, including the permission requirement and qualifications. Direct section retrieval encountered a content-type error. No site-specific permitted-development conclusion is drawn.

[Open primary source](#)

[D81] Planning Act (Northern Ireland) 2011: section 24

Permission requirement identified in the official Act PDF/indexed text. Section 23 defines development; section 24 contains the requirement. Direct section retrieval encountered a content-type error. Relevant exceptions and amendments require site-specific checking.

[Open primary source](#)

[D82] Welsh Government: Planning (Wales) Act 2026 - overview and coming into force

Updated 8 July 2026; current published overview and commencement explanation reviewed. Some provisions commenced on 28 April 2026; the remaining provisions require commencement orders. Check applicable orders and transition rules before treating a consolidated provision as operative.

[Open primary source](#)

[D83] HM Treasury: responsibilities

Current official description reviewed on 15 October 2026: economic/finance ministry, public spending and economic policy. No particular minister, borrowing rate or spending amount is needed for the proposal.

[Open primary source](#)

[D84] UK Debt Management Office: About the DMO

Current official description reviewed: Treasury executive agency; government debt/cash management, local-authority lending and management of specified funds. Explains institutional roles rather than an approval for any new scheme.

[Open primary source](#)

[D85] UK Debt Management Office: About PWLB lending

Relevant current role and capital-lending provisions reviewed: Treasury policy/rates, DMO administration and borrower affordability/eligibility. This does not establish eligibility for an uncreated settlement body, universal loan access or individually negotiable PWLB interest rates.

[Open primary source](#)

[D86] UK Parliament: Taxation and spending - MPs' Guide to Procedure

Current official procedural explanation reviewed, including statutory authority and the Commons' role. Used to distinguish lawful tax/spending powers from private financing negotiations, not to replace nation-specific devolved/local tax rules.

[Open primary source](#)

[D87] HM Treasury: Managing Public Money

Publication page and stated accountability principles reviewed; updated 13 August 2026. The linked 298-page manual was not reviewed in full. A central-government benchmark for responsible use, not a claim that every provision applies identically to every UK council.

[Open primary source](#)

[D88] MHCLG: Local government transparency code 2015

Current publication page reviewed: minimum data, publication arrangements and democratic accountability; updated 29 January 2025 with procurement reconciliation guidance. Applies to England and relevant covered bodies. Detailed code thresholds are not asserted here.

[Open primary source](#)

[D89] Local Government Act 1972: section 100A - admission to meetings

Relevant English statutory framework checked through official indexed text: public meetings and specified confidential/exempt-information exclusions. Direct section retrieval failed. This is distinct from a proposed duty of day-to-day councillor access; other nations' meeting laws require their own assessment.

[Open primary source](#)

[D90] IMF Finance and Development. What Is Capitalism? Conceptual explainer.

Conceptual explainer, originally Finance & Development, June 2015; current hosted text and original publication record reviewed. Explains private ownership, markets, competition and varieties of capitalism. This is not a primary causal study of settlements or a definition of democracy.

[Open primary source](#)

[D91] ONS: Measuring progress, well-being and beyond GDP in the UK - May 2024

Official statistical framework and introductory explanation reviewed: GDP omits important wellbeing/environmental effects and their distribution. Used to support additional outcome measures; the bulletin's historical estimates are not presented as current October 2026 figures.

[Open primary source](#)

[D92] IMF Working Paper 19/34. Inequality of Opportunity, Inequality of Income and Economic Growth (2019).

Primary research working paper, February 2019. Methods, baseline Table 1 and conclusion reviewed: cross-country dynamic panel/System-GMM, five-year real per-capita GDP growth, Gini and earnings/education mobility proxies; Table 1 samples vary from 22 to 101 countries. Research in progress, not necessarily IMF policy; identification assumptions and proxy limits apply.

[Open primary source](#)

[D93] Bank of England Staff Working Paper 965. Financial concerns and the marginal propensity to consume in Covid times: evidence from UK survey data (2022).

Primary working paper; abstract, survey methods and main qualifications reviewed. Weighted balanced panel: 7,313 individuals, three pandemic survey waves. Hypothetical spending intentions; associations, not an observed GDP multiplier or a test of settlements.

[Open primary source](#)

[D94] OECD STI Working Paper 2025/04. Concentration and business dynamics in product markets (2025). DOI 10.1787/d714066e-en.

Primary working paper, DOI 10.1787/d714066e-en. Abstract, executive summary and data/methods reviewed: Euromonitor sales linked to ultimate owners; 369 product markets, 25 European countries and US, 2012-21. Observational business-market evidence; not a survey of land ownership or corruption.

[Open primary source](#)

[D95] Bank of England: What is GDP?

Official conceptual explainer, updated 7 March 2025; GDP components and limits reviewed. Distinguishes national output from income distribution and environmental welfare. No historical spending-share estimate is presented as a current October 2026 statistic.

[Open primary source](#)

[D96] Bank of England: How fast can the economy grow?

Official conceptual explainer, updated 11 February 2020; supply capacity, infrastructure, investment, skills/specialisation and demand-related inflation reviewed. Its dated growth forecast is not used as a current forecast or ceiling.

[Open primary source](#)

International research and implementation

[G1] Garden Cities of To-Morrow, 1902 edition

Historical planning proposal; relevant land-finance and Social Cities sections reviewed. It is not a controlled scientific evaluation.

[Open primary source](#)

[G2] Letchworth Garden City Heritage Foundation - Our History

Primary institutional account of construction from 1903 and present estate-income reinvestment; not an independent welfare evaluation.

[Open primary source](#)

[G3] Auroville - Vision of the City

Primary project description: 50,000 planned, green belt and around 3,300 residents listed. The resident figure is undated, not a verified October 2026 census.

[Open primary source](#)

[G4] A critical examination of a community-led ecovillage initiative: a case of Auroville, India

Climate Action 1, 15 (2022). DOI 10.1007/s44168-022-00016-3. Abstract, methodology and substantive sections reviewed; ethnographic experience plus published material.

[Open primary source](#)

[G5] Freiburg municipality - Vauban sustainable housing

Primary municipal description. The page uses 5,300 in its heading and 5,500 in its body; treated as an approximate project scale.

[Open primary source](#)

[G6] Tale of Two Ecosuburbs in Freiburg, Germany: Encouraging Transit and Bicycle Use by Restricting Parking Provision

Transportation Research Record 2187(1), 114-122 (2010). DOI 10.3141/2187-15. Publisher abstract reviewed; full text restricted. Comparative observational evidence.

[Open primary source](#)

[G7] Cloughjordan Ecovillage: Community-Led Transitioning to a Low-Carbon Future

Peer-reviewed book chapter, 2020, pp. 287-303. DOI 10.1007/978-3-030-47587-1_16. University record and abstract reviewed; historical project profile.

[Open primary source](#)

[G8] Cloughjordan Ecovillage - Our Story

Primary operator indexed text reviewed: 67-acre site, shared farm/green space and renewable heat. Direct page retrieval blocked.

[Open primary source](#)

[G9] Niche entrepreneurs in urban systems integration: On the role of individuals in niche formation

Environment and Planning A (2017). DOI 10.1177/0308518X17705383. EVA Lanxmeer case section reviewed; qualitative process analysis.

[Open primary source](#)

[G10] Resident participation in public green-space management: five years of self-management in EVA-Lanxmeer
Wageningen research report 270 (2011), 50 pp.; English description of Dutch title. Institutional record/summary reviewed; resident assessments, not a causal biodiversity experiment.

[Open primary source](#)

[G11] Feldheim - energy systems

Primary operator account reviewed. Small village; wind, biogas, heat network, backup heat and storage. Project-performance claims are operator statements.

[Open primary source](#)

[G12] Brandenburg infrastructure ministry - Feldheim energy-independent village visit

Official record, 6 July 2022; confirms local electricity/heat networks. This is an administrative description, not a controlled energy-impact study.

[Open primary source](#)

[G13] Same primary source as [H12].

[G14] Self-build housing schemes in Marinaleda - commons governance case study, English translation ACME 19(3), 684-706 (2020). DOI 10.14288/acme.v19i3.1998. Abstract, finance/labour description and institutional analysis reviewed; practitioner participant observation and documents.

[Open primary source](#)

[G15] Andalusia official gazette - Marinaleda self-build housing funding order
2013 official record concerning a grant for 25 dwellings, complementary funding and extended delivery dates. Historical funding evidence, not a current offer.

[Open primary source](#)

[G16] Shared Equity Homeownership Evaluation: Case Study of Champlain Housing Trust
Urban Institute final report, October 2010, 27 pp. Introduction, programme structure and institutional summary reviewed; client-level historical outcome analysis, not random assignment.

[Open primary source](#)

[G17] Champlain Housing Trust - Shared Equity Innovation
Primary operator description reviewed: assistance, shared appreciation, equity retention and membership governance. Displayed portfolio figures are dated February 2024 and are not used as a current census.

[Open primary source](#)

[G18] Housing cooperativism for mutual help: education, experience and struggle in Uruguay
Revista de Ciencias Sociales 33(47), 111-138 (2020). DOI 10.26489/rvs.v33i47.6. University repository abstract reviewed; PDF located but text retrieval was unreliable.

[Open primary source](#)

[G19] Exploring the conditions for the emergence and sustainability of housing cooperatives in Latin America
Housing Studies, published online 2024. DOI 10.1080/02673037.2024.2392697. Indexed publisher text reviewed; direct full retrieval blocked. Used only for described cooperative principles and transfer constraints.

[Open primary source](#)

[G20] Baan Mankong: going to scale with slum and squatter upgrading in Thailand
Environment and Urbanization 17(1), 21-46 (2005). DOI 10.1177/095624780501700104. Publisher abstract reviewed; programme/practitioner account.

[Open primary source](#)

[G21] CODI - Baan Mankong railway-side communities report
Official programme update, 23 September 2026, with August 2025 component statistics. Confirms continuing implementation; railway-side figures are not totals for the entire national programme.

[Open primary source](#)

[G22] Leave no one behind: community-driven urban development in Thailand
IIED Working Paper, December 2016, 36 pp. ISBN 978-1-78431-436-1. Summary, methods and inclusion cases reviewed; six purposively selected cases, focus groups/interviews, not representative national impact estimates.

[Open primary source](#)

[G23] Borrowing size in networks of cities: City size, network connectivity and metropolitan functions in Europe
Papers in Regional Science 95(1) (2016). DOI 10.1111/pirs.12181. University abstract reviewed; metropolitan-function analysis, not a 50,000-person settlement trial or GDP forecast.

[Open primary source](#)